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ENVIRONMENTAL ASSESSMENT BOARD



ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARINGS

VOLUME: 164

DATE: Wednesday, June 17, 1992


BEFORE:

HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

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ENVIRONMENTAL ASSESSMENT BOARD
ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARING

IN THE MATTER OF the Environmental Assessment Act,
R.S.O. 1980, c. 140, as amended, and Regulations
thereunder;

AND IN THE MATTER OF an undertaking by Ontario Hydro
consisting of a program in respect of activities
associated with meeting future electricity
requirements in Ontario.

Held on the 5th Floor, 2200
Yonge Street, Toronto, Ontario,
Wednesday, the 17th day of June,
1992, commencing at 10:00 a.m.

VOLUME 164

B E F O R E :

THE HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

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MS. C. MARTIN	Administrative Coordinator
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M. CAMPBELL)	PUBLIC HEALTH COALITION
		(OPHA, IICPA)
G. GRENVILLE-WOOD		SESCI

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1 ---Upon commencing at 10:03 a.m.

2 THE REGISTRAR: Please come to order.

3 This hearing is now in session. Be seated, please.

4 THE CHAIRMAN: Mr. Monger?

5 MR. MONGER: Thank you, Mr. Chairman.

6 AMIR SHALABY,
7 JOHN KENNETH SNELSON,
8 JANE BERNICE TENNYSON,
9 FREDERICK GEORGE LONG,
BRIAN PAUL WILLIAM DALZIEL,
HELEN ANNE HOWES; Resumed.

10 CROSS-EXAMINATION BY MR. MONGER (Cont'd):

11 Q. Dr. Long, at the end of the day
12 yesterday we were talking about your financial analysis
13 of the current plans, and you were telling us how you
14 did some kind of comfort check in relation to rates in
15 other jurisdictions, and I just have a few more
16 questions on that point.

17 The first one is, what other
18 jurisdictions did you consider, and maybe you can
19 answer at the same time how you chose those
20 jurisdictions as the appropriate ones to provide
21 benchmarks.

22 DR. LONG: A. I don't think I said we
23 used it is a comfort check, but something that Hydro is
24 doing more and more of is comparing its rates with
25 rates in other jurisdictions.

1 Basically, and this is, I think,
2 something that is evolving, but currently there are two
3 composites that Hydro is using, one is a composite of
4 rates in other Canadian jurisdictions, basically the
5 other publicly-owned provincial utilities in Canada,
6 and second is a North American composite and that
7 includes the other Canadian utilities, but it also
8 includes other large North American utilities, and the
9 selection of those utilities was largely based on size,
10 and I can't recall exactly what the parameters were,
11 but they had to be fairly substantial utilities.

12 Q. Are those rate comparisons collected
13 in some kind of document?

14 A. Currently there isn't a stand-alone
15 document that's put out, but it's certainly made use of
16 in various places both internal to the company and
17 externally. I believe, for instance, part of Hydro's
18 rate submission includes some of that material.

19 Q. Now, just to finish this area off,
20 and you spoke to this a little bit yesterday, but I
21 want to understand a little better what the
22 significance of the benchmarks are. If it's not a
23 comfort check, what does the benchmark tell you?

24 A. Basically it tells you how you are
25 doing compared to these other jurisdictions, and it is

1 difficult to take it much beyond that.

2 As I mentioned yesterday, if the other
3 jurisdictions, say, from industry's point of view
4 represent areas of competition, then it certainly is
5 going to be of interest to that sector of our customer
6 base.

7 Basically Hydro's management would like
8 to see that any, for instance, advantage we have in
9 terms of price with respect to other, say, North
10 American jurisdictions is not significantly eroded.
11 Certainly with the current short-term rate increases
12 there is some concern along those lines, but the
13 comfort that's provided by this type of comparison is
14 in fact that the position of Hydro versus the North
15 American composite, while it's changing, we still
16 maintain a position below that composite.

17 Q. Thank you, Dr. Long.

18 These next questions I believe should be
19 directed to Dr. Tennyson, and it has to do with the
20 definition of reasonably-priced electricity. At page
21 26254 of Volume 148, you said that to many reasonably-
22 priced --

23 THE CHAIRMAN: The page again? I'm
24 sorry, Mr. Monger, I hate to interrupt.

25 MR. MONGER: Sorry. It's page 26254 of

1 Volume 148.

2 THE CHAIRMAN: Thank you.

3 MR. MONGER: Q. And you said from line

4 15:

5 "The need for reliable source of
6 electricity is still priority for many
7 and that reasonably priced reliable
8 electricity is important for the
9 provincial economy."

10 I believe this was one of the conclusions
11 that was drawn out of your public consultation, and I
12 realize you discussed this at some length with counsel
13 for the Voice of Women. But I guess to start off I
14 have a bit of a trite question. Wouldn't you have been
15 rather surprised to find that many people believed that
16 illogically priced unreliable priced electricity was
17 important to the economy?

18 DR. TENNYSON: A. I don't understand the
19 question.

20 Q. We can move from the question.

21 The point really is, wouldn't you agree
22 with me that that statement allows for a myriad of
23 subjective meanings that reasonably-priced electricity
24 can mean very many things?

25 A. Certainly it could.

1 Q. Okay. And I guess I am interested to
2 know how you would define reasonably-priced
3 electricity?

4 A. Well, it wasn't up to me to define it
5 in terms of it. These are the findings from the
6 feedback program.

7 I think that if you look historically at
8 our various involvement activities, that has always
9 been something that the public has indicated.

10 Q. Would you agree with me that
11 reasonably-priced electricity is not necessarily
12 synonymous with low rates?

13 A. I think the phrase, the reason it
14 says is that there would have to be all sorts of
15 considerations in that. So I would agree with you, I
16 don't think it necessarily means the lowest or low.

17 Q. Okay. So, in Exhibit 66, the draft
18 demand/supply planning strategy, I suspect you will
19 remember it was recognized at page 11-3 that many
20 people indicated that they are prepared to accept
21 additional costs to protect the environment. And I
22 believe on the same page reference in Volume 148 you
23 said something along the lines that there is aggressive
24 support for environmental protection, or actually what
25 you said is public support for environmental protection

1 is stronger than ever.

2 Would you agree with me that
3 reasonably-priced electricity could reflect this
4 apparent willingness to assume extra costs to protect
5 the environment?

6 A. I think they are separate points. I
7 think if you look at some of the other conclusions that
8 were drawn, or the findings I should say, were that
9 cost considerations should be balanced with other
10 considerations.

11 So, clearly, what you are indicating is a
12 message coming from the public.

13 Q. What I am asking you is, and I am not
14 saying it should necessarily be the ultimate criteria,
15 but one of the criteria that could define reasonably-
16 priced electricity is the extra cost that might be
17 incurred in protecting the environment; would agree
18 with that?

19 A. Yes.

20 Q. And so would you go so far as to
21 accept that the price of reasonably-priced electricity
22 could contain a cost element reflecting quantifiable
23 external costs related to the environmental damage
24 associated with producing electricity?

25 A. No. I think we have gone through

1 that quite extensively on this panel and others.

2 THE CHAIRMAN: I think your question
3 could, not should; is that right?

4 MR. MONGER: Yes, it was simply a
5 question of could.

6 DR. TENNYSON: I am not sure I am the
7 best one to speak to this, but I think we did discuss
8 that some of these cannot even be quantified.
9 Certainly, if I had been asked the questions in terms
10 of costing, there are many things that cannot be
11 costed.

12 THE CHAIRMAN: I think the question might
13 be that if it were feasible and desirable to quantify
14 environmental costs, would the public accept that as
15 part of the reasonably-priced electricity.

16 MR. MONGER: Or could they.

17 Q. Could it be within the definition of
18 reasonably-priced electricity?

19 MS. HOWES: A. I was just going to add
20 something. I would suggest that for most members of
21 the public, they wouldn't be familiar with the term
22 environmental externalities or whatever phrase, and I
23 am suggesting I think that perhaps to an educated
24 member of the public, perhaps your statement is true,
25 but I would say public at large would not even know

1 what residual environmental effects were, environmental
2 damage costs, or the term.

3 Q. I understand the part of Hydro's role
4 is educating the public on electricity-related issues
5 right now, as part of encouraging demand management for
6 instance. Actually, I will just leave that.

7 I think I will get to the point. I want
8 to know, given that you recognize that it is
9 potentially a very subjective definition, how this
10 conclusion out of the public consultation that
11 reasonably-priced reliable electricity is considered
12 important to the economy is utilized?

13 How does it have any meaning that you can
14 use from a planning perspective?

15 [10:13 a.m.]

16 DR. LONG: A. I think what it does in a
17 broad sense is it indicates that we need to keep an eye
18 on price.

19 Certainly in terms of what
20 reasonably-priced electricity means to the public, I'm
21 not sure that we will fully know that until we reach
22 some threshold where they start to tell us that price
23 is a concern.

24 Q. How exactly is this conclusion
25 utilized now as part of the planning process?

1 DR. TENNYSON: A. I will let others
2 speak to this as well, but you keep calling it a
3 conclusion. I'm saying that it was a finding from the
4 program.

5 We are trying to give a full range of
6 concerns and comments and results of our feedback
7 program and that clearly was indicated as one of the
8 findings. I think you would be the first to agree that
9 there are many people out in the public of Ontario that
10 are concerned about reasonably-priced electricity.

11 Q. I would agree completely. I think my
12 client is one of those entities that's concerned about
13 reasonably-priced electricity.

14 My point was simply, what does it mean
15 and how do you apply it? I think what you are telling
16 me, and tell me if I am wrong, is that it is just a
17 finding and it is something you realize is out there?
18 It has no --

19 A. We take it into consideration
20 clearly.

21 DR. LONG: A. I think it reinforces the
22 status of low cost as a primary planning criteria.

23 Q. So, Dr. long, you are telling me what
24 reasonably-priced electricity means is low cost
25 electricity?

1 A. No, I didn't say that. I said that
2 the conclusion or the finding that our customers have a
3 concern for the price of electricity confirms the
4 status of that primary criteria.

5 Q. I don't know if this gets us much
6 further, but I believe Mr. Snelson spoke to the fact
7 that the important point now from Ontario Hydro's
8 perspective and I suspect from most clients'
9 perspective is low bills not low rates.

10 Would you agree with me on that?

11 A. And the criteria is cost, and that I
12 think ultimately will be reflective of low bills, but
13 there is still a concern for rates as well.

14 Q. Thank you. I think I will move on.

15 The next point I would like to deal with
16 is future consultation. From our review of the
17 transcripts I understand that it is clear that much has
18 been asked about the public consultation process
19 leading up to the Demand/Supply Plan and the Update.

20 We are also aware that Mr. Anshan has
21 asked some questions on behalf the Canadian Association
22 of Energy Service Companies about the role of future
23 consultation in meeting the plan demand management
24 objectives. The CAC has a few further questions in
25 relation to this future consultation.

1 I'm not sure who is the most appropriate
2 person to answer these. First off, would Hydro agree
3 with me that as a result of the move to planning around
4 the median the risks associated with failing to meet
5 the demand management target has increased relative to
6 the risks associated with failing to meet the targets
7 when Hydro was planning to the upper?

8 MR. SNELSON: A. No.

9 Q. So I take it then you wouldn't agree
10 with me that -- you would agree with me, wouldn't you,
11 Mr. Snelson, that demand management now is a relatively
12 greater portion of the response portfolio available to
13 be utilized to meet demand than it was when you were
14 planning to the upper and you were seeking approvals
15 from major supply?

16 A. Demand management targets are larger
17 and demand management is a larger portion of our
18 program and, consequently, we are relying more heavily
19 upon it.

20 I don't see that as being a consequence
21 of planning around the median rather than planning to
22 the upper. I see that as a consequence of a larger
23 demand management program.

24 Q. Okay, that's fine. My point was,
25 would you agree with me that it is now more important,

1 in the sense that there is a high reliance placed on
2 the demand management program, that all reasonable
3 steps be taken in a timely manner to ensure that the
4 demand management objectives are obtained?

5 A. The demand management program is
6 challenging and it is important that we take the steps
7 that are necessary to bring it about.

8 Q. Okay. Mr. Shalaby stated at page
9 28373, Volume 160, that's 28373, that:

10 "...the concept of partnership with
11 many stakeholders is a central theme in
12 delivering demand management."

13 I take it that this means that Ontario
14 Hydro would agree that the successful fostering of
15 these partnerships is an essential element of meeting
16 your demand management objectives and, thus, reducing
17 the risks associated with the relatively increased
18 reliance on demand management.

19 MR. SHALABY: A. The first part I would
20 accept, that it is a central theme to delivery of
21 successful demand management.

22 The extent to which it introduces a risk,
23 I have got to think about. It increases the
24 effectiveness, it reduces our certainty perhaps about
25 whether customers and allies and others will

1 participate in demand management. .

2 Q. I think that answer gets to my point.

3 I take it you foster these relationships because
4 stakeholder participation is a key element in getting
5 them to buy into Ontario Hydro's demand management
6 agenda?

7 A. It is part of the communication and
8 participation, yes.

9 Q. Now, I have handed out yesterday a
10 document which is entitled - Mr. Lucas - the CACO,
11 which is Ontario, Proposed Protocols for Hydro
12 Consultation.

13 Does the Board have a copy of that
14 document?

15 THE CHAIRMAN: I don't know. I don't
16 think so.

17 MR. MONGER: I think the Board should get
18 a copy.

19 THE REGISTRAR: Which one is that?

20 MR. MONGER: It is the CAC Ontario
21 Proposed Protocols for Ontario Hydro Consultation. It
22 is the one I put the precis on yesterday.

23 Q. This is a document that the CAC asked
24 REIC Limited, one of the CAC's consultants, to prepare.

25 THE CHAIRMAN: We need an exhibit number

1 for this.

2 THE REGISTRAR: 720.

3 THE CHAIRMAN: Thank you.

4 ---EXHIBIT NO. 720: Document entitled: CAC Ontario
5 Protocols for Ontario Hydro Consultation

6 MR. MONGER: Q. What it does is briefly
7 examine two existing consultation protocols designed to
8 facilitate the implementation of programs which are
9 currently being used in Ontario by the Ministry of
10 Housing and the Canadian Standards Association.

11 Have any of the panel members had an
12 opportunity to review this document.

13 MR. SHALABY: A. I scanned it, yes. We
14 can never admit to anymore than scanning.

15 Q. Okay. I would like to ask you for
16 your comments on a couple of the statements made.

17 On the first page after the document
18 precis in the fourth paragraph it says that:

19 In order to maximize the effective
20 development and implementation of its
21 demand management plan and thereby
22 minimize the potential risks associated
23 with an increased reliance on demand
24 management Ontario Hydro must integrate a
25 structured formalized consultative

1 process involving representatives of
2 those recognized stakeholders who
3 participate in the demand management
4 programs.

5 CAC Ontario believes that
6 implementation of such consultation
7 process will result in better demand
8 management delivery and a better demand
9 management plan.

10
11 A formalized ongoing consultative process
12 which provides stakeholders direct input
13 into Ontario Hydro demand management
14 policy development does not currently
15 exist. It is the CAC Ontario's belief
16 that the ambitious demand management
17 goals that Ontario Hydro has set will not
18 be achieved unless a formalized
19 consultative process is instituted
20 immediately.

21 [10:25 a.m.]

22 I understand that there is a lot in
23 there, but would you agree with me that a formalized
24 ongoing consultative process that provides stakeholders
25 direct input on a regular basis into Ontario Hydro's

1 demand management policy development, including aspects
2 of project design and implementation, would be very
3 helpful in the attempt to achieve the demand management
4 targets?

5 DR. TENNYSON: A. If I can respond.

6 In terms of designing the public
7 involvement program that will occur, we are at the, I
8 understand, the earliest stages of it.

9 Hydro has received this brief, has
10 received others, and we are in the process of designing
11 the involvement activities for energy management
12 planning strategy. And that will involve all
13 stakeholders. There are target groups being
14 identified, there is government, there are many
15 interest groups. It's going to be very, very broadly
16 based, is my understanding. And as I say, we are in
17 the stages of designing it.

18 In terms of other public involvement
19 activities, one of the things that has been undertaken
20 or that we are continuing to do is to inform the public
21 of all of the various programs, and I think that in
22 that sense we are trying to provide the information on
23 a full range of our activities.

24 So at this present time, as you are
25 aware, there is an information based involvement

1 program going on actively, and as well we are designing
2 the program for the energy management planning
3 strategy.

4 There are lots of good ideas in this
5 proposal and they are all being considered and looked
6 at. That's my understanding of it.

7 Q. I won't push this too far because I
8 understand you are saying you are at an initial stage.
9 But I am interested in knowing if you can tell me at
10 this stage whether what is envisioned is an ongoing
11 formalized process that involves a group of individuals
12 who represent stakeholders on an ongoing basis?

13 A. As I say, it's my understanding this
14 is in the formative stages. Certainly that is one
15 option that would be looked at, but we are actively
16 designing what we would consider to be the best
17 program. And our consultation activities are always
18 ongoing and they have to be flexible to respond to the
19 various needs that will emerge in terms of the whole
20 demand management program.

21 Q. Thank you. I will just ask one more
22 question then.

23 You recognize when I say ongoing what I
24 mean is something along the lines of the CSA, Consumer
25 Advisory Panel, where the same individuals or groups

1 continue on from month to month, year to year, to have
2 input into the planning and development and
3 implementation of a program. And that's the way I mean
4 ongoing and I am wondering whether you anticipate, at
5 this stage, anything like that occurring?

6 A. It would be something that would be
7 considered. Ms. Howes may have more information.

8 MS. HOWES: A. Definitely that's one of
9 the options being considered, as Dr. Tennyson
10 mentioned.

11 You also may be aware that there have
12 been discussions between the energy management branch
13 and a group called the Ontario Energy Environment
14 Caucus. That is a group that represents many of the
15 intervenors that are currently at this particular
16 Demand/Supply Plan hearing. There have been
17 discussions with that particular group. I think there
18 have been at least two meetings and there has been
19 correspondence back and forth.

20 At this point I can't tell what you the
21 outcome is going to be but I think there are some good
22 signs on both side.

23 THE CHAIRMAN: What was the name of that
24 outside body again?

25 MS. HOWES: The group is called the

1 Ontario Energy Environment Caucus. It's a group that's
2 supported by, my understanding is the Ministry of
3 Energy and they supply advice to the Ministry of Energy
4 on environment/energy issues.

5 DR. TENNYSON: If I can just add, I think
6 Ontario Hydro is looking forward to working with all
7 the stakeholders who want to work with us in this
8 important area.

9 MR. MONGER: Q. That's good to hear,
10 thank you. I will move on.

11 As the CAC expressed in its opening
12 statement, it is interested in examining before this
13 Board the use of the price mechanism as an adjunct to
14 other demand management efforts undertaken by Ontario
15 Hydro. This has led to us ask questions on this
16 subject in Panel 1, 3 and 4. From our questioning of
17 those other panels we have learned that variations on
18 an all-price case in which price alone was used to
19 control demand such that it did not exceed existing
20 capacity, and the mixed high incentive demand
21 management and price case which also sought to control
22 demand such that it did not exceed existing capacity
23 were considered as 2 of the 15 representatives plans
24 studied in detail by the system planners as part of the
25 draft demand/supply planning strategy.

1 We also learned from our earlier
2 questioning that the system planners chose not to
3 examine these strategies further, and we now have some
4 questions for the system planners about those two
5 options and why they weren't pursued.

6 We would like to start with a document
7 entitled: Meeting Future Energy Needs, Draft
8 Demand/Supply Planning Strategy, Reference Document,
9 Financial Impacts of Representative Plans, report No.
10 BESR 807, January 1987.

11 It's my understanding, Mr. Chairman, that
12 this document has not been made an exhibit. It's a
13 attached to one interrogatory and I think Mr. Starkman
14 last week brought your attention to a couple of the
15 pages in it and I would like it made an exhibit if
16 possible.

17 THE CHAIRMAN: The whole document as an
18 exhibit?

19 MR. MONGER: Yes, please.

20 THE REGISTRAR: 721.

21 ---EXHIBIT NO. 721: Document entitled: Meeting Future
22 Energy Needs, Draft Demand/Supply
23 Planning Strategy, Reference Document,
 Financial Impacts of Representative
 Plans, report No. BESR 807, January 1987.

24 MR. MONGER: Q. Dr. Long, it says at the
25 beginning of this document, in the introduction that

1 the discussion of the results of this assessment were
2 provided by the controller's division, is that your
3 division?

4 DR. LONG: A. My function was in
5 controller's division at that time, so essentially,
6 yes.

7 Q. Were you involved in the preparation
8 of this document?

9 A. Personally, no.

10 Q. Are you familiar with this document?

11 A. I have glanced through it, yes.

12 Q. Would you agree with me that one of
13 the things discussed in this document are the impact on
14 rates of the various representative plans under
15 different load growth scenarios?

16 A. Yes.

17 Q. Would you agree with me that the
18 basis for the analysis were full LMSTM runs performed
19 on each of the representative plans under most likely
20 load growth and upper load growth scenarios?

21 MR. DALZIEL: A. Yes.

22 Q. Just to have it clear, the results of
23 those LMSTM runs can be found in Appendix C to this
24 document?

25 A. Yes.

1 Q. Is there any other document of which
2 you are aware that reproduces these LMSTM results run
3 on their representative plans?

4 A. Not that I am aware of, no.

5 Q. As I said, we wish to focus on two of
6 the representative plans, namely plan P and --

7 THE CHAIRMAN: Sorry, Mr. Monger.

8 What do you mean by most likely load
9 growth?

10 MR. DALZIEL: Most likely load growth at
11 that time was the jargon used to describe the median,
12 you could equate that with what we call the median
13 today.

14 THE CHAIRMAN: So we could treat it as
15 the median load growth.

16 MR. DALZIEL: That's correct.

17 MR. MONGER: Q. As I said, we would like
18 to focus on plan P and AD for our purposes.

19 Would you grow with me in a plan P is an
20 all-price case in which no new supply is added at the
21 time of system constraint, but rather prices are raised
22 in order to keep demand within the system's existing
23 capacity?

24 MR. DALZIEL: A. I believe the price
25 plan, plan P, did include the development of the Little

1 Jackfish project, but aside from that, yes.

2 Q. And that any conservation other than
3 the price mechanism itself is price-induced
4 conservation. There is no incentive for demand
5 management in the program?

6 A. I believe that's the case, yes.

7 Q. And then plan AD, in contrast, was a
8 high incentive demand management program which was
9 predicted to provide 4,100 megawatts of demand
10 management by 2010, and then price driven conservation
11 from 2008 on once demand management alone could not
12 meet the growth in demand, is that a fair summary of
13 plan AD?

14 A. I think there may have more than
15 4,200 megawatts of demand management, is that the
16 number you mentioned?

17 Q. I said 4,100 megawatts of demand
18 management in 2010.

19 I think this case assumed 100 per cent
20 incentives paid by Hydro in which case there would have
21 been more demand management required than that amount.

22 Q. If I can just have one moment.

23 A. I think looking at some of the
24 detailed information, I think the 4,100 that you are
25 referring to corresponds to the EEI component,

1 electrical efficiency improvements. There is also
2 interruptible load and load management megawatts which
3 would be in addition to that.

4 Q. Okay. That explains the discrepancy.

5 A. Yes.

6 Q. I take it that no model was run in
7 which high incentive demand management and the price
8 mechanism were used concurrently from the start date of
9 the models?

10 A. That may be what plan AD, the
11 all-demand plan, is. The demand management measures
12 were being required from the beginning of the planning
13 period, and when the demand management, certain
14 hydraulic projects as well as independent generation
15 were insufficient, then prices were used to control the
16 rest of the shortfall in demand.

17 Q. That was my understanding of plan AD
18 as well. Maybe my questions wasn't clear.

19 What I was asking was, was there any plan
20 where in a temporal sense the price mechanism and high
21 incentive demand management were operating concurrently
22 from the beginning of the plan?

23 A. I don't believe so.

24 Q. Thank you. Now, could you please
25 turn to page C-5 of this document. I just want to

1 confirm with you that what this page represents is the
2 LMSTM results under the most likely load growth
3 scenario for plan P?

4 A. Yes.

5 Q. And if you can flip over the page to
6 page 6, you will see the same results for plan AD.

7 A. Yes.

8 Q. I take it that at the time that this
9 report was produced, these LMSTM results were your
10 department's best estimates of how these plans would
11 perform and what the system impacts of instituting
12 these plans would be?

13 A. Yes.

14 Q. Okay. And I take it that these
15 plans, these two plans were chosen to be amongst the 15
16 out of the dozens of plans that Mr. Shalaby told us
17 that you thought up, because from a planning
18 perspective they deserve some kind of serious analysis?

19 A. I think at the time the interest was
20 in looking at a broad range of different approaches.
21 There were four broad different approaches at the time
22 that were considered, and then within one of those
23 different approaches various plans were considered.

24 [10:40 a.m.]

25 So I think it was in the spirit of

1 looking at a wide range of cases that these two
2 particular plans were examined.

3 Q. I take it that they were not seen as
4 plans from the lunatic fringe. They were plans that
5 merited the kind of effort that goes into doing full
6 LMSTM runs?

7 A. I think they were examined in order
8 to understand what kind of impacts these approaches may
9 have and, in turn, to provide some guidance in the
10 development of the demand/supply planning strategy.

11 Q. Thank you. Now, could you please
12 turn to page 20 of the report. This is the graph, at
13 the top of page, it is the graph that Mr. Starkman
14 brought to the Board's attention a few days ago.

15 Would you agree that the dark line shows
16 the predicted rate levels associated with plan P, the
17 all-price case?

18 A. Yes.

19 Q. And then one of the hatched line, it
20 is not very clear which one, are the rate levels
21 associated with plan AD?

22 A. Yes.

23 Q. Okay. Focussing on plan P, would you
24 agree with me that the dark line shows what the price
25 would have to be at any given time between 1986 and

1 2010 if price was the only tool used to restrict demand
2 to system capacity limits?

3 A. Generally, yes. What I was checking
4 was to see if independent generation was also assumed
5 to be utilized in this case to help meet demand and it
6 was as well.

7 Q. By that you mean it is some kind of
8 NUG plan?

9 A. Yes, there was some independent
10 generation. I mentioned Little Jackfish was included,
11 but aside from that then prices were being used.

12 Q. Can you tell me how much NUG capacity
13 was predicted at that time?

14 A. 1,200 megawatts by the year 2010.

15 Q. I should probably know this, but how
16 does that compare with what's predicted for 2010 today?

17 A. About a quarter.

18 Q. Thank you. Would you agree with me
19 that what this graph shows is that the real price
20 increase above 1986 base rate levels or price levels is
21 a mere 15 per cent at 2010 and that, according to this
22 graph, would have the effect of limiting demand to
23 system capacity?

24 A. It appears by 2010 that relative to
25 1986 it is about 15 per cent higher, but I think the

1 more significant message is really from the level that
2 the price is at in the year 1998 and the percentage
3 increase from that point, because it is in 1998 that in
4 this case where the load meeting capability of the
5 system at the time is in balance with demand and then
6 it is raising prices from an 80 per cent level to a 115
7 per cent level which is being utilized to achieve the
8 price induced effects of controlling demand.

9 Q. You just said about a 80 per cent
10 level to 115. So roughly a 35 per cent real price
11 increase?

12 A. That's what this is indicating.

13 Q. Just to be clear, this is a 35 per
14 cent increase with 1,200 megawatts of NUG production
15 and no incentive-driven demand management and no
16 Manitoba Purchase and no other hydraulic other than
17 Little Jackfish?

18 A. I believe so. What's happening is
19 that from 1998 onwards, is you are acquiring some of
20 the demand management that you acquired in the
21 all-demand case through the use of incentives.

22 So a lot of that potential is out there,
23 but you haven't acquired it prior to 1998.

24 Q. And you are not acquiring it through
25 incentives, but through natural uptake?

1 A. Here you would be acquiring it
2 effectively through the price-induced mechanisms, yes.

3 Q. Okay. Would you agree with me that
4 on the basis of this graph a hypothetical consumer who
5 maintains the same consumption level from 1986 to 2010
6 would on average over the entire period have an
7 electricity bill lower in real terms than his 1986
8 bill?

9 A. If, starting in 1986, the events
10 unfolded as assumed in the description of this case at
11 that time, that may be the case.

12 Q. Okay. If this graph represented
13 reality it would be the case, wouldn't it?

14 If you drew a straight line across at
15 100?

16 A. It looks as though what you are
17 suggesting is close.

18 Q. Is close or --

19 A. Well, you are saying that the --

20 Q. I am asking whether the average bill,
21 based on this graph, would be --

22 A. I can't do it unless as you
23 suggested, you integrate the areas under the curve and
24 I can't do that here.

25 I am saying, certainly eyeballing it, it

1 looks as though your suggestion is correct or, as I
2 said, close.

3 Q. Okay. In Panel 1 we asked Mr. Burke
4 about the all-price case and specifically we asked at
5 page 1789, which I believe is in Volume 10 - it is -
6 whether he could recall what kind of price increase
7 would be required over the 25-year period of the plan
8 such that no supply option would have to be brought
9 into stream.

10 He told us at that time that he thought
11 the real price increase was of the magnitude of
12 approximately 100 per cent and he repeats that on the
13 next page. To be fair to Mr. Burke, he did say he
14 would have to check an interrogatory response to be
15 sure.

16 Now, it appears from this exhibit,
17 wouldn't you agree with me, that Mr. Burke was quite
18 mistaken about his belief that it would require 100 per
19 cent?

20 DR. LONG: A. This case, I think you
21 have to recall, is keeping demand in line with
22 capability of the system. That may be...

23 Q. Why don't we look at the question
24 that we asked Mr. Burke, then. The question was at
25 page 1789, bottom quarter of the page, the whole

1 question reads:

2 You said earlier that you did look at
3 price only as an option in the
4 Demand/Supply Plan at an earlier stage.
5 Do you recall what kind of price increase
6 you contemplated over the 25-year period
7 would be required so that no supply
8 options would have to be brought into
9 stream?

10 I believe that that's the same question
11 in essence as was addressed in this document that we
12 have just entered as an exhibit; is that not correct?

13 MR. SHALABY: A. I think we indicated
14 that there are non-utility generation options being
15 brought in, some hydraulic options being brought in and
16 there is Darlington being brought in the case that we
17 just described in your Exhibit 721.

18 Q. Okay. So you are telling me that,
19 what -- I don't know if you can speak for Mr. Burke?

20 A. No, I cannot. Let's cut it short
21 there.

22 Q. So, essentially what you are saying
23 is it is a different question?

24 A. The question was no supply and I am
25 telling you that case P had Darlington, had non-utility

1 generation and had some hydraulic.

2 Q. The question was asking - if you look
3 at it - it was asking about the option that was studied
4 at an earlier stage quite specifically.

5 Was there a study done at an earlier
6 stage that looked at something that did not include
7 Darlington, that did not include the NUGS you described
8 or Little Jackfish?

9 A. No.

10 Q. So this must be what Mr. Burke was
11 talking about?

12 DR. LONG: A. I think he also refers to
13 an interrogatory there and there is one that looks at
14 choking off demand so that it doesn't increase above
15 the then current levels. That is a different question.

16 Q. I am going to turn to that now, but
17 first just to get this clear, you think that Mr. Burke
18 may have been talking about that interrogatory
19 response, the letter that's attached to it, rather than
20 the study that was done as part of the demand/supply
21 planning strategy; is that what you are telling me?

22 A. That's possible, but I am not sure.

23 Q. You would agree with me that Mr.
24 Burke's statement that 100 per cent real price increase
25 would be required if he was talking about the document

1 I have just handed out is not correct according to the
2 model?

3 MR. DALZIEL: A. I'm not sure what Mr.
4 Burke may have been thinking of at the time, but in
5 1986 when these cases were being looked at they were
6 being looked at under what was called most likely low
7 growth or median load growth and upper load growth.

8 Certainly the 100 per cent value is
9 within the range of price increases that were
10 considered at the time depending on load growth.

11 Q. So it is possible --

12 A. Under upper load growth, I think the
13 results are indicating that price increases of a
14 hundred per cent and more would be required.

15 Q. Why don't we then look at the
16 interrogatory that Mr. Burke referred to. It is
17 Interrogatory No. 114.67.

18 THE REGISTRAR: That will be .56.

19 THE CHAIRMAN: I take it we know that
20 indeed is the interrogatory he was referring to?

21 MR. MONGER: Yes, we do. We were
22 provided, Mr. Chairman, with a copy of the
23 interrogatory following the follow-up questions to Mr.
24 Burke.

25 THE CHAIRMAN: All right.

1 MR. MONGER: This interrogatory has
2 already been made an exhibit, just so the record is
3 complete. It was 261.78 and we did ask questions about
4 it in Panel 4.

5 THE CHAIRMAN: So it should be given a
6 number now.

7 THE REGISTRAR: I did so. It is .56.

8 THE CHAIRMAN: Thank you.

9 ---EXHIBIT NO. 683.56: Interrogatory No. 114.67

10 MR. MONGER: Q. I guess what we should
11 be looking at is the letter that is attached to this
12 interrogatory which is a letter from Mitchell Rothman,
13 chief economist, dated January 8th, 1986, which is
14 approximately one year prior to the release of the
15 exhibit that we have entered today, the financial
16 analysis document.

17 You will see in the second paragraph that
18 he predicts that electricity prices would have to be
19 about 140 per cent higher by 2005 in order to keep
20 demand within the capacity of the existing system and
21 he also mentions in the next paragraph that they were
22 reviewing the model to confirm its price effects.

23 [10:55 a.m.]

24 Now I will get to my question in a
25 moment.

1 We asked questions about this letter in
2 Panel 4 from page 11890 on. Specifically, we asked Mr.
3 Burke, I believe, to confirm that in order to have an
4 all-price case, you would need a real price increase of
5 5.6 per cent per year as indicated by this letter, and
6 Mr. Burke told us that at the time of writing the
7 letter, that this was their best estimate, or it was
8 their estimate and that he would imagine that a lower
9 number would be required as of last September.

10 I would just like to get some
11 clarification of the evidence that's on the record to
12 date on this point.

13 Does anyone on this panel know whether
14 the 5.6 per cent per year that Mr. Rothman predicted
15 was necessary, was a real price increase or one that
16 included inflation?

17 DR. LONG: A. I think as the letter
18 states, it's relative to a previous price projection,
19 so I think you can take it as real.

20 Q. Do you know whether Mr. Rothman based
21 his analysis on the upper load forecast or the median
22 case or most likely case?

23 A. I would think it's the most likely.

24 I think it is also worth pointing out
25 that the 140 per cent with respect is relative to that

1 previous project, so it's not from the starting point
2 of the projection period necessarily.

3 Q. Could you explain that to me in a
4 little more detail?

5 A. I recall that back in about the time
6 the long-term price forecast was declining, so rather
7 than, if it starts at 100 per cent, say, in 1995 and
8 declines over the period, the 140 per cent, it's not
9 clear to me exactly what the reference point for that
10 is, whether it's the end point of that projection, but
11 certainly I wouldn't take it as being the beginning
12 point.

13 Q. So if it's the end point, the real
14 price increase from the beginning point would be--

15 A. Substantially less, yes.

16 Q. --substantially less. Okay.

17 Dr. Long, can you continue, can you
18 explain the difference in the numbers between the
19 all-price case that was analyzed by your department,
20 using the LMSTM runs, and the numbers that Mr. Rothman
21 and his department seemed to be generating?

22 A. I don't have a reconciliation of
23 those two, so I really can't answer that question.

24 Q. You would agree with me that your
25 analysis or your department's analysis was the later

1 one?

2 MR. SHALABY: A. My recollection of this
3 series of projections of price is that it really hinges
4 on the elasticity assumption you make, of course. And
5 the interrogatory you furnished here, 1.14.67, says
6 that the elasticity is minus .4, that was assumed in
7 1985.

8 The results in your Exhibit 721 may have
9 assumed a different elasticity.

10 Q. They did, Mr. Shalaby, and we are
11 going to get to that in a moment.

12 A. Yes. So really it's a series of
13 snapshots, of estimates and understandings about price
14 elasticity that change from time to time.

15 Opinions about the own price of
16 elasticity of electricity have change the from time to
17 time. And the opinion of the economists generally are
18 that there are limits to how far you can push our
19 understanding of price elasticity. They may have
20 confidence, for example, about the effect of a 5 or 10
21 per cent increase in price, a small change in price,
22 they can estimate what the effect of that will be on
23 demand. But when you push the equations to limits that
24 are beyond the range of observation or the range of
25 historical change such as 140 per cent change, you

1 enter a realm of speculation, and you are pushing the
2 model beyond what people would feel comfortable with or
3 beyond the validity range that people will be
4 comfortable with.

5 So opinions on if you really double or
6 triple price, what will happen to demand, vary from
7 time to time and assumptions about real price of
8 electricity projections and many other assumptions.

9 So in a nutshell then, what I am saying
10 is that snapshots in '85 and '87 and '92 about how much
11 price increase is necessary to choke off demand will
12 vary depending on our understanding of elasticity and
13 our opinion on the validity of the use of elasticity.

14 MR. DALZIEL: A. Just so to add to that,
15 the third paragraph of Mr. Rothman's letter mentions
16 the possibility of examining the price elasticity and
17 providing results at a later date.

18 DR. CONNELL: Could I introduce another
19 observation, referring back to plan P, perhaps I should
20 offer a question first. That is, was Mr. Rothman's
21 letter applying to plan P essentially?

22 MR. DALZIEL: I don't know the answer to
23 that. I don't know if Mr. Rothman's letter is in
24 direct evidence to plan P or whether it's at the
25 initial stage of trying to examine this approach and

1 this type of case.

2 DR. CONNELL: Just in case it was, my
3 observation is simply to underline the phrase in his
4 letter that is within the capability of existing
5 facilities, but the energy demand in plan P modified
6 loads after pricing increases substantially from, if we
7 take, I suppose we should take '86 as the base from 119
8 terawatthours up to 168, and much of that increase
9 seems to be borne by the coal-fired stations which
10 double in output, I suppose it must be operating at a
11 much higher capacity factor then, and there is a line
12 in plan P labelled supplemental which I am not sure we
13 have had an explanation for.

14 MR. SHALABY: That is the name that was
15 used to describe what we call NUGs today.

16 DR. CONNELL: It's those two, that is the
17 increased coal.

18 MR. SHALABY: And the nuclear. I would
19 expect the nuclear increased significantly.

20 DR. CONNELL: Yes, I was assuming that
21 Darlington coming on stream would account for that.

22 MR. SHALABY: And a bit in hydraulic,
23 so...

24 DR. CONNELL: Yes, not much.

25 MR. SHALABY: Not much.

1 DR. CONNELL: Thank you.

2 MR. SNELSON: One of the factors to keep
3 in mind when talking about the capability of the
4 existing system as described during the representative
5 plan analysis prior to the draft demand/supply planning
6 strategy, is that there was no allowance made for any
7 retirements of existing generating plants in those
8 plans.

9 So essentially the assumption was that
10 all-plant would last forever or could be rehabilitated
11 to last forever. So that is a change which has gone in
12 one direction in the '89 plan and then partway back
13 into base plans.

14 MR. MONGER: Q. Mr. Snelson, just on
15 that point. Maybe I have missed something, but are
16 there major retirements planned between now and 2010?

17 MR. DALZIEL: A. I'm sorry, the question
18 is, what retirements are planned in the Update?

19 Q. Between now and 2010?

20 A. Lakeview.

21 Q. Simply Lakeview?

22 A. Lakeview units, yes.

23 Q. Would the panel agree that the
24 results generated in the financial analysis document,
25 because they were the result of a full LMSTM result

1 run, are likely to be better or more reliable than the
2 results generated by Mr. Rothman?

3 MR. SHALABY: A. Not necessarily. The
4 results produced by LMSTM, the LMSTM model has a single
5 equation that would represent the price elasticity.
6 The models the economists and load forecasters would
7 use might be more sophisticated than that, figuring in
8 time lags and other secondary effects.

9 I don't know that for a fact, but their
10 models -- you can't get much cruder than single
11 equation which is what LMSTM had.

12 Q. So when you say the model was crude,
13 you are saying you don't stand by the results generated
14 by the LMSTM run?

15 A. They are indicative, but when you try
16 and compare a certain price increase from one model to
17 a certain price increase predicted by another model, I
18 am just saying the LMSTM model only has a single
19 equation and the load forecasters and economists may
20 use more sophisticated modelling than that.

21 Q. Do you know if they did?

22 A. I know what they did, for example, in
23 response to another interrogatory, and I don't know
24 whether you are going to come to it or not,
25 Interrogatory No. 10.12.12. And they have ran their

1 EEMO models with different annual increases in forecast
2 price of electricity.

3 So methodologies progress in time and
4 they feed into them, their understanding of price
5 mechanisms, they feed into them their understanding of
6 the interaction between demand management and
7 price-induced reductions.

8 Q. Are you able to tell me -- sorry?

9 A. Those are the progressions that occur
10 in the modelling and in the understanding of price
11 effects.

12 Q. Are you able to tell me whether Mr.
13 Rothman's model as of 1986, early 1986, I guess it's
14 actually 1985 if he produced the letter January 1986,
15 were more sophisticated than the model used in the
16 LMSTM runs in 1986 to produce the document dated
17 January 1987?

18 A. No, I cannot tell you that.

19 Q. Do you have a sense?

20 A. If I had to guess, I would guess that
21 it probably was equal in sophistication but perhaps it
22 had judgment added to it that LMSTM didn't have the
23 benefit of.

24 Q. Let's look to judgment then. If you
25 turn to page 5 --

1 THE CHAIRMAN: Should we mark 10.12.12?

2 MR. MONGER: We can. It asks a different
3 question than the one we are asking now. It was one we
4 intended to talk to.

5 THE CHAIRMAN: Except that it's referred
6 to in the evidence.

7 MR. SHALABY: It is a more recent opinion
8 on the question of what price increases are necessary
9 to balance demand and supply, I thought I would bring
10 it to your attention.

11 MR. MONGER: You may as well mark it, Mr.
12 Chairman, but what the question asks is, to the best of
13 my memory, what price increase would be required to
14 limit demand to the current level of demand, which is a
15 significantly different question, I would suggest, than
16 what amount would be required to limit the system
17 capacity. Particularly given the surplus that we are
18 anticipating in the next several years.

19 Q. Would you agree that it is a
20 different question, Mr. Shalaby?

21 MR. SHALABY: A. It is a different
22 question, but it's in the same family of investigations
23 and that is how does the price mechanism work and how
24 hard do you have to have hit prices to reduce demand.

25 Q. The numbers produced in that

1 interrogatory answer will not answer the question
2 that -- will not produce an answer that is equivalent
3 to plan P?

4 A. It's done six or seven years later.
5 A whole lot of things have changed so it doesn't
6 exactly address the plan P question.

7 Q. It doesn't ask the same question?

8 A. I would argue that it is probably
9 more relevant in the sense of more recent information.
10 It's not the same question, I agree with you.

11 Q. Let me get this clear. It's a
12 fundamentally different question to ask what would it
13 take to hold demand at today's level, than to ask what
14 would it take to hold demand at projected system
15 capacity? Which I take it we don't meet now until some
16 time like 2008, anyway.

17 A. It's a different question. I
18 continue to say it's in the same category of
19 investigations. That's all.

20 Q. Okay. But I am trying to understand
21 how it's more relevant to what we are asking?

22 A. It's more recent, that's all.

23 Q. It is more recent, thank you.

24 THE CHAIRMAN: We will give it a number
25 in any event. The next Interrogatory No. 10.12.12.

1 THE REGISTRAR: .57.

2 THE CHAIRMAN: Thank you.

3 ---EXHIBIT NO. 683.57: Interrogatory No. 10.12.12.

4 MR. MONGER: Q. Can we look at page 5
5 please of the document that we introduced today, the
6 financial assessment document.

7 At the bottom of that page you will see
8 the price elasticities that were in fact used and you
9 will note that they were significantly different from
10 the price elasticities referred to in Interrogatory
11 1.14.67.

12 MR. SHALABY: A. I offered that as an
13 explanation between the differences, yes.

14 Q. So there is some judgment happening,
15 I take it there, in the choice of those elasticities
16 rather than Mr. Rothman's?

17 A. Yes.

18 Q. And would you agree --

19 A. Well, it's in consultation with Mr.
20 Rothman's.

21 Q. It was in consultation?

22 A. Yes.

23 Q. So does that mean that the people
24 that generated this document spoke to Mr. Rothman, got
25 his elasticities, which I believe were, even at that

1 time, were around minus .4 and chose instead to use a
2 much higher elasticity?

3 A. The judgment was made with discussion
4 with the economists and the reason for the difference
5 as I understand it, is projections or the base price
6 for electricity. As Mr. long and Mr. Dalziel
7 indicated, a very relevant part that have discussion is
8 increases in electricity prices from where. Where is
9 the base case and how far above that do you go.

10 The current corporate forecasts at the
11 time showed a decline in real prices, the economists
12 felt that they wanted to simulate increases from a flat
13 real prices. They assigned a higher probability that
14 prices would be flat in real terms and then declining
15 in real terms starting in 1990 or somewhere about that.

16 They wanted the model to compensate for
17 the decline in real prices that were seeing in some of
18 the forecasts. That is where some judgment came in.
19 They said they wanted to compensate for different base
20 in the prices that they were observing.

21 Q. I take it that that perspective was
22 rejected by the people that prepared the financial
23 analysis document. This financial assessment document?

24 A. What perspective.

25 Q. The perspective that the lower

1 elasticity should be used?

2 A. Well, the advice came from the
3 economists and they gave us advice that these
4 elasticities would capture the effect that they capture
5 in their own models. That was the advice that was
6 given that the time.

7 Q. So, to just clarify, are you telling
8 me that Mr. Rothman and Mr. Burke recommended the
9 numbers 0.95 for residential, 0.60 for general and 0.66
10 for direct?

11 A. They or their staff, yes.

12 Q. Okay. Just so we have it on the
13 record, would you agree that an 0.95 elasticity for
14 residential consumers suggests that residential
15 consumers react relatively strongly to a price
16 mechanism?

17 A. Yes. Hold on a minute. No, I think
18 less strongly. My understanding is 0.95 means you have
19 got to raise prices by 95 per cent to get a 10 per cent
20 reduction in demand. Am I understanding elasticities
21 wrongly?

22 [11:20 a.m.]

23 Q. That is certainly not my
24 understanding of elasticities, Mr. Shalaby, but neither
25 of us are economists --

1 A. I'm sorry. A 10 per cent increase in
2 price would result in a 9-1/2 per cent reduction in
3 demand, yes.

4 Q. So it is almost a one-to-one
5 relationship?

6 A. So they react stronger than the other
7 sectors. That's what these figures indicate.

8 Q. If they have got a .95 they are
9 reacting significantly stronger than somebody with,
10 say, a .4.

11 A. Yes.

12 Q. Okay.

13 A. That was the projection then or the
14 understanding then. I don't know what the current view
15 on that is.

16 Q. We will get to the current
17 understanding in a minute.

18 A. I am drifting more and more into
19 testimony that I am trying to help you with other
20 people's understanding and I am probably beyond my
21 limits of knowledge on this subject.

22 Q. You know, though, I take it, that Mr.
23 Burke's department supplied you with these or Mr.
24 Rothman's department supplied you with these
25 elasticities?

1 THE CHAIRMAN: That's what the document
2 says, isn't it?

3 MR. SHALABY: Yes.

4 THE CHAIRMAN: It says prices history
5 provided by load forecast department were...

6 MR. MONGER: The reason I am asking, Mr.
7 Chairman, I am about to get to that point, is that on
8 Panel 1 Mr. Burke told us about supplying elasticities
9 to this department to generate this document, to the
10 planners to generate this document, and he told us at
11 that time that the appropriate elasticity to generate
12 these numbers was -- that he believed the one that he
13 supplied was .4, the same elasticity used in the load
14 forecaster's model.

15 MR. SHALABY: My understanding of that
16 discrepancy is that to duplicate what they will achieve
17 by a .4 in their models, these were the numbers that
18 had to be used in LMSTM to duplicate what they would
19 achieve in their models using .4.

20 MR. MONGER: Q. So just to clarify the
21 record, .4 was not the elasticity provided, these
22 elasticities were the elasticities provided?

23 MR. SHALABY: A. For the LMSTM model.

24 Q. For the LMSTM model.

25 A. For the load forecasting model, .4

1 was the elasticity.

2 Q. Is the one that is being used.

3 A. You are moving from one model to
4 another and there are a whole lot of differences
5 between them. What they wanted to duplicate, what they
6 had confidence in, and that's their models, to
7 duplicate that with LMSTM these were the numbers that
8 were necessary.

9 Q. Can you tell me if there is any other
10 published report used by anybody else within Hydro,
11 including the load forecasters, that graph out for us
12 the necessary price implications of plan P and plan AD
13 or is this the only report leading up to the
14 Demand/Supply Plan that does that, to the best of your
15 knowledge?

16 A. Well, I think there are other
17 documents that discuss the analysis of representative
18 plans.

19 Q. I agree with you.

20 A. This is one in a series of reports.
21 This particular report is report No. BESR 8702. 8701
22 is a larger document that has more description of plan
23 P, for example.

24 Q. I agree.

25 A. Exhibit 66 has discussion of

1 representative plans.

2 Q. I understand that there are a lot of
3 other --

4 A. Exhibit 77 has a description of the
5 load forecasting models and the elasticity assumptions.

6 Q. I understand that there are --

7 THE CHAIRMAN: Excuse me.

8 MR. MONGER: Sorry.

9 THE CHAIRMAN: I don't want to be seen to
10 be bailing out people under cross-examination, but I
11 think it would be helpful to our consideration if some
12 brief and lucid exposition of the subject matter we
13 have been discussing for the last 20 minutes could be
14 produced as some sort of an undertaking from Ontario
15 Hydro.

16 MR. SHALABY: You mean it wasn't
17 obviously wasn't clear what this mumbo jumbo is all
18 about, Mr. Chairman?

19 THE CHAIRMAN: I think it would be
20 helpful to us if we had that perhaps on a one-page
21 document.

22 MR. MONGER: Specifically, Mr. Chairman,
23 are you asking for an explanation of the relationship
24 between Mr. Rothman's letter --

25 THE CHAIRMAN: There seems to be some

1 kind of a discrepancy between what Mr. Rothman and Mr.
2 Burke said earlier and what is revealed in this
3 document we are now looking at which is Exhibit 721.

4 I just would like to have the
5 explanation, if there is one, of what that is.

6 MR. SHALABY: We can certainly undertake
7 to do that. I would feel more comfortable having the
8 economists themselves explain the discrepancy. I am
9 relaying that secondhand from discussions with them.

10 MR. MONGER: Mr. Chairman, thank you. I
11 think I am only going to be about 15 more minutes with
12 this.

13 THE CHAIRMAN: I am not cutting you off
14 this particular subject.

15 MR. MONGER: I wasn't sure what you were
16 saying with your bailing out of cross-examination.

17 THE CHAIRMAN: No, I didn't mean that.

18 Could we have an undertaking number,
19 please?

20 THE REGISTRAR: 684.35.

21 ---UNDERTAKING NO. 684.35: Ontario Hydro undertakes to
22 provide a one-page explanation of the
23 discrepancy between Messrs. Burke and
Rothman as shown in Exhibit 721.

24 MR. MONGER: Q. Can anybody on the panel
25 tell me what real price increase we have experienced in

1 Ontario as of 1991 from the date that this document
2 starts off; namely 1986?

3 DR. LONG: A. I don't have it with me
4 right now, but I can certainly find it probably over
5 the break.

6 MR. MONGER: Are we anywhere near the
7 break, Mr. Chairman?

8 THE CHAIRMAN: You usually have some
9 control over when the break should be.

10 If you want to call it for now, then we
11 will take it now and we can continue with your
12 cross-examination.

13 MR. MONGER: I think it would be helpful
14 to have that.

15 THE CHAIRMAN: If you have got any other
16 similar questions of that that Dr. Long may have had,
17 perhaps you could let him know and he can perhaps be
18 armed and ready when he comes back after the break.

19 MR. MONGER: Thank you, Mr. Chairman.

20 THE CHAIRMAN: We will take a break now,
21 15 minutes.

22 THE REGISTRAR: Please come to order.

23 This hearing will recess for 15 minutes.

24 ---Recess at 11:26 a.m.

25 ---On resuming at 11:45 a.m.

1 THE REGISTRAR: Please come to order.

2 This hearing is again in session. Please be seated.

3 MR. MONGER: Q. Mr. Shalaby, just to
4 clear something up, I panicked a little bit when the
5 Chairman bailed out, and I don't remember the answer to
6 the question. Are there any other documents prepared
7 as part of the demand/supply planning strategy that
8 explicitly map out the rate impacts - explicitly, as in
9 the graph we find on page 20 - of plan P and plan AD?

10 MR. SHALABY: A. The answer I gave was
11 the family of documents that this comes from, 8702 is
12 the number of your Exhibit 721. 8701, to the best my
13 memory, would have the rate impact graphed in there as
14 well.

15 Q. As the same graph or some -- that's
16 fine, thank you.

17 A. It better be, if it isn't perhaps we
18 have yet another discussion.

19 MR. DALZIEL: A. I think 8701 is purely
20 a description of the plans. It doesn't have any
21 financial results.

22 THE CHAIRMAN: Is 8701 an exhibit? I
23 looked through the --

24 MR. DALZIEL: It is an attachment to an
25 interrogatory. It may be.

1 THE CHAIRMAN: Because I was looking
2 through 721 and I couldn't find a description of the
3 plans. The reason for that is because it is in 8701;
4 is that correct?

5 MR. DALZIEL: That is correct. It is an
6 attachment to Interrogatory No. 10.14.20.

7 THE CHAIRMAN: That has not been entered
8 as a number already. It should be, perhaps, given one.
9 10.14.20.

10 THE REGISTRAR: 10.14.20 will be .58.
11 ---EXHIBIT NO. 683.58: Interrogatory No. 10.14.20.

12 MR. MONGER: Can you tell me the title of
13 that document?

14 MR. DALZIEL: Analysis of Representative
15 Plans: The Plans. [Laughter]

16 THE CHAIRMAN: Thank you. You seem to
17 know what P and AD were and I was very impressed
18 because I thought you were getting it out of 721.

19 MR. MONGER: I'm sorry, Mr. Chairman, P
20 and AD, it is my understanding, and I have read a lot
21 of them, so it is probably a fairly good understanding,
22 analysis of the plans from various perspective appears
23 in the number of documents, many of which have been
24 filed as Exhibits mostly around the 50s in terms of
25 exhibit numbers. There are several that describe the

1 plans in some detail.

2 Q. My question really was, are there any
3 others that deal with this aspect of the plan -- the
4 price implications?

5 MR. DALZIEL: A. There is the family of
6 documents that Mr. Shalaby has referred to. They were
7 known as, internally, as BESR 8701, 02, 03. There is a
8 series of them and the other --

9 THE CHAIRMAN: Where do they stop? Is
10 there an 04?

11 MR. DALZIEL: 06 or 07 is where they
12 stop. Several of those were attached to Interrogatory
13 11.14.13, not all, but several of the others.

14 THE CHAIRMAN: I do not have a number for
15 that one either.

16 THE REGISTRAR: 10.14.13.

17 MR. MONGER: 11.14.13.

18 THE REGISTRAR: 11.14.13. That would be
19 .59.

20 ---EXHIBIT NO. 683.59: Interrogatory No. 11.14.13.

21 MR. DALZIEL: Then the only other reports
22 that I am aware of that would provide the information
23 is the main reports or the summary reports, which was
24 Exhibit 66, which was the draft demand/supply planning
25 strategy, and Exhibit 67 which was the supplementary

1 documents. In particular then, section F of Exhibit
2 67.

3 MR. MONGER: Q. I have been provided
4 over the break with a copy of the Coalition's exhibits,
5 Exhibit 706, Environmental Coalition, and at page 4 of
6 that document -- I would be surprised if the Board has
7 this before them actually. Why don't I just ask?

8 Dr. Long, on page 4 there is a chart
9 called Forecast Real Electricity Price Index and it is
10 my understanding that Ontario Hydro has checked the
11 figures that appear on that page and accept them as
12 correct; is that right?

13 DR. LONG: A. Yes, and in particular the
14 column labelled Managed Surplus without GST provides a
15 price index forecast that goes back to 1986.

16 Q. And would you agree with me that what
17 that shows is that by, I believe it is 2011, the real
18 price increase that is now anticipated, less GST, by
19 2011, is 36 per cent above the rate that was in
20 existence in 1986?

21 A. Yes, the real price increase of 36
22 per cent.

23 Q. And I take it if things stay as they
24 are to that, you can add GST which gets us to 46 per
25 cent above the base rate for 1986?

1 A. Well, if you add 7 per cent you will
2 get that, yes.

3 Q. Now, we are going to experience price
4 increases in the next few years that appear to be
5 greater than the price increase that was apparently
6 required in 1986, according to the analysis on plan P,
7 to limit demand to the capabilities of the system as it
8 was anticipated to exist in 1986.

9 You would agree with that statement,
10 would you not, that we have now or we anticipate
11 experiencing in the next couple of years, real price
12 increases greater than were believed to be necessary at
13 the end of the planning period on the analysis of plan
14 P under the median load or most likely case?

15 A. Certainly the prices, by 2011, are
16 currently projected to be higher in real terms, yes.
17 The pattern over the period is quite different.

18 Q. I understand the pattern is
19 different. But in fact, by, I think 1994, we are going
20 to experience real price increases, I guess since 1986,
21 that are greater than were anticipated necessary to
22 2010. Just looking at the numbers, they are something
23 like 24 per cent as opposed to 15; is that correct?

24 A. That is correct.

25 Q. And a much greater price increase is

1 going to occur in the next few years than was
2 anticipated was necessary under plan AD to reduce the
3 need for new supply. Would you agree with that?

4 A. Yes.

5 Q. Now, did you as planners -- actually,
6 hang on to that for a second. Would you agree with me
7 that directionally because the forecast for potential
8 demand management since 1986 is up and the anticipated
9 load growth is down, less of a real price increase
10 should be needed today to keep demand below system
11 capacity than was predicted to be needed in 1987 if the
12 same model was used to analyze this.

13 MR. SHALABY: A. Not necessarily, the
14 reason for that is, when you think of why demand goes
15 down when the prices go up, demand goes down because
16 people will conserve, increase their efficiency of use,
17 switch to another fuel, or stop doing the business they
18 are doing with electricity. These are some of the ways
19 that a higher price would reduce the demand.

20 The demand management programs that we
21 have merely achieve some of these objectives by another
22 means; making people more efficient in their use and
23 switching fuels away from electricity.

24 Q. I am not talking about the attainable
25 demand management through price incentives. It is

1 true, is it not, that the projected or anticipated
2 natural available energy efficiency improvements has
3 increased since 1986? You now think there is more
4 natural EEI or EEI independent of Ontario Hydro's
5 initiatives available than there was in 1986?

6 A. Probably, yes.

7 Q. If there is more EEI, economic EEI,
8 available wouldn't you agree with me that the potential
9 for natural uptake is also greater?

10 A. Possibly, yes.

11 MR. B. CAMPBELL: Mr. Chairman, I am not
12 sure we aren't getting well beyond what could fairly be
13 called any kind of a planning matter in which this man
14 with his expertise, the ability for the affect on
15 uptake of EEI. There was a great deal of time spent on
16 this by the people on panel 4 who have particular--

17 THE CHAIRMAN: I understand that, but --

18 MR. B. CAMPBELL: --expertise in at that
19 area.

20 THE CHAIRMAN: But isn't the interplay of
21 these factors, EEI natural and the attainability and
22 rates, the interplay of all these factors surely is a
23 planning issue, I would have thought.

24 MR. B. CAMPBELL: I am just getting a
25 little worried, Mr. Chairman, that we are getting well

1 beyond that and into the very specific demand
2 management kinds of questions which Mr. Burke dealt
3 with and that the people from the energy management
4 branch dealt with in terms of how much -- you will
5 recall Mr. Burke gave a long exposition on what should
6 be considered natural and the base, and how they are
7 related and so on. I am just a little concerned about
8 how far into that --

9 THE CHAIRMAN: He has not gone that far
10 yet. He has not gone into the questioning of how these
11 numbers arrived. He has just been asking, as I
12 understand it, how these various factors, given what
13 they may be, interplay.

14 MR. MONGER: That is what I am asking.

15 THE CHAIRMAN: I think that seems to me
16 to be well within the planning parameters.

17 MR. MONGER: I recognize that there are
18 no economists on the panel. I am simply asking that.
19 I am not asking for the hard numbers. I am just
20 saying, directionally, would you agree with me that if
21 there more potential demand management there, it is
22 more likely that a greater amount of electrical
23 efficiency improvements can occur naturally?

24 MR. SHALABY: I accept that, yes.

25 MR. MONGER: Q. So would you go to the

1 next step, which I still think should be within the
2 parameters of a planning question. Does that mean, in
3 your opinion, that a lesser increase in price should
4 attain the same level of natural EEI?

5 MR. SHALABY: A. The relationship in the
6 natural uptake of EEI in price -- there is a
7 relationship. The higher the price of electricity the
8 easier it is for people to adopt an energy efficiency
9 measure. They are not separate. People adopt an
10 energy efficiency measure --

11 Let's take a hypothetical case where
12 somebody has made his house very efficient. There is
13 nothing more that can be done. An increase in price
14 will not have the effect of increasing the efficiency
15 of use or reducing the use. The person will either
16 have to absorb the price hike or do without certain
17 services.

18 They are saying that price hike serves to
19 induce people to adopt efficiency measures or to fuel
20 switch into something else or to leave the province or
21 something of that sort. Price hike in itself -- he
22 cannot apply efficiency and then fuel switching and
23 then raise the price to gain further reductions. Where
24 would they come from? They can only have the
25 reductions once, either by programs or by a natural

1 adoption of EEI or via price mechanism. Once you get
2 them, you get them, you cannot have them again.

3 Q. I would agree you, Mr. Shalaby, that
4 you can only attain the EEI that is available.

5 My question was that if more natural EEI
6 is now projected as available, then it should be easier
7 for - and maybe this is where you don't agree with me -
8 it should be easier for people to adopt those EEI
9 measures, and therefore a lesser price increase could
10 get the same level of EEI that a greater price increase
11 would have required if there was less natural EEI
12 available.

13 [12:00 p.m.]

14 A. Not necessarily. And again one of
15 the reasons could be that the remaining EEI measuring
16 available could be quite expensive and you really need
17 a big hike in prices to have people adopt them.
18 People may have taken the easy steps and what remains
19 are the difficult steps.

20 MR. SNELSON: A. I think another factor
21 that makes this discussion more difficult is the
22 shifting base, and that is that the base load forecast
23 that we are using today is based upon the current
24 projections of electricity prices which as you have
25 indicated are higher than were the projections back in

1 1985 or '86. And the load forecasting models have
2 built into them relationship between electricity price
3 and electricity use, which is effectively the sorts of
4 elasticities that we have been talking about.

5 So, already accounted for in the base
6 load forecast that we have is some reduction in
7 electricity demand due to the now higher forecast of
8 electricity prices. And so there is a question as to
9 any additional energy savings beyond that, they are a
10 different set because some of those will have already
11 been accounted for in the new load forecast based upon
12 the new prices.

13 Q. I seem to recall from Mr. Mark's
14 cross-examination that there was a question about the
15 relationship under the Update of natural EEI and
16 induced EEI given the increased price forecast, and I
17 believe the evidence at that time was that you didn't
18 know whether in fact the natural EEI had been taken
19 into consideration with the new targets.

20 Are you now saying that you know that a
21 greater amount of natural EEI has been captured?

22 A. I think that we are talking about two
23 different sets of differences.

24 With respect to Mr. Mark, I believe the
25 question was relative to the change in electricity

1 price forecast between the production of the load
2 forecast in late 1991 and the update to the load
3 forecast -- sorry, late 1990, and the update to that
4 load forecast produced in late 1991. The question that
5 was being addressed there is, had that change in the
6 load forecast accommodated the change in price that had
7 happened over that time, the change in the price
8 forecast over that time, and that was the area that I
9 think we had some uncertainty.

10 Clearly, the load forecast that we are
11 using today, even with that uncertainty is either based
12 upon the price of electricity as forecast in late 1990
13 or late 1991, either of which is considerably higher
14 than the price forecast for electricity as produced in
15 '85 or '86.

16 Q. Okay. So are you telling me that in
17 fact the extra potential for natural EEI uptake has not
18 in fact necessarily increased because of factors you
19 have just told me, remaining, not total, remaining from
20 today?

21 A. I think I am telling you that we are
22 having a great deal of difficulty with the specific of
23 this question because it's so intimately related with
24 the assumptions and the load forecast and that this is
25 something that is part of the load forecast and then

1 how that is translated into the primary load forecast,
2 the basic load forecast and how it's translated into
3 the primary load forecast. The details of that are
4 things that the load forecasting people and the demand
5 management people are most familiar with.

6 Q. Have you investigated specifically
7 whether lower real price increase than was predicted
8 necessary in 1986 would be required today because of
9 the increased potential if it exists for further
10 natural energy efficiency improvements?

11 MR. SHALABY: A. My understanding that
12 the latest advice on what price increases are required
13 today are the ones reported in response to
14 Interrogatory 10.12.12.

15 Q. Mr. Shalaby, we --

16 A. We have been through that this is a
17 different question, but those are the more recent
18 numbers and we don't have anything different than that
19 recently.

20 Q. Okay. And those numbers do not
21 address the point of -- I think it's clear what those
22 numbers address from our previous discussion, I will
23 leave that for a moment.

24 A. Yes.

25 Q. Would you agree with me - this is

1 another proposition that may run into some difficulty -
2 that the fact that the load forecast, the anticipated
3 load growth is down, should require a lower price
4 increase, directionally, in order to keep the system
5 within its current capacity, a lower increase than was
6 required in 1986 because the load forecast is down.

7 MR. SNELSON: A. The reason for the
8 whispering on this side of the table is that I think we
9 want to just check whether the basic load forecast as
10 forecast today is in fact down from '86, because there
11 have been some movements up and some movements down,
12 and based on my recollection I am not sure of that
13 point.

14 MR. B. CAMPBELL: Mr. Chairman, I would
15 also remind the Panel that there was a great deal of
16 time - by the "Panel" I mean of course the hearing
17 panel, not the witness panel - that there was a great
18 deal of time spent on appropriate current elasticities
19 during the course of Mr. Burke's several appearances.

20 So that whatever figures were used in
21 discussion in '86 of elasticities, the current evidence
22 on the view of elasticities was the subject of a great
23 deal of cross-examination, including, if I recall,
24 there was a whole range of studies covering about 10
25 years that were discussed with Mr. Burke in the course

1 of his appearance on this matter.

2 THE CHAIRMAN: I didn't know that this
3 necessarily came into this and perhaps it does, I guess
4 it does now that I think about it, but the question was
5 real assuming that the basic load forecast is down,
6 should the price be adjusted in such a way as to
7 preserve the capacity of the existing system?

8 MR. MONGER: Yes, would a lower price be
9 required than was required in 1986.

10 MR. SNELSON: I think we have just done
11 some checking and we believe that in fact the basic
12 load forecast is higher today than it was forecast to
13 be in '86.

14 MR. MONGER: Q. Okay. How much, do you
15 know?

16 MR. DALZIEL: A. By about 3,000
17 megawatts in 2010.

18 Q. Just to remind the Board, as Mr.
19 Campbell has brought this point up, I think you will
20 probably recall that Mr. Burke was not particularly
21 comfortable with the elasticities that he had provided
22 once you start getting into significant price increases
23 because of the past experience in Ontario with
24 significant price increases.

25 Are you able to tell us, as of 1992, what

1 kind of real price increases up to the end of the
2 planning period would be needed such that there would
3 be no need for new supply? I understand that you have
4 given us an answer in 10.12.12 that asks can you keep
5 it at the current demand level. But are you able to
6 tell us what it would be if you allowed -- in order to
7 keep it -- sorry, such that there would be no need for
8 new supply?

9 MR. SNELSON: A. Can you perhaps just be
10 a bit more specific, because there is the question
11 about whether it's a need for new major supply or a
12 need for no supply at all, or a need for no demand
13 options or supply options?

14 Q. I am going to get into this a bit
15 more later on, so why don't I leave that for a moment
16 and ask you: Did you as planners revisit plan P and
17 plan AD as part of the process of preparing the Update?

18 A. I believe not, and it wasn't reviewed
19 either in great detail in the process of preparing the
20 Demand/Supply Plan because it would have been contrary
21 to the demand/supply planning strategy which we were
22 following. We felt that issue had been settled at that
23 time in developing the strategy.

24 Q. So these plans or plans of this
25 nature were dealt with in the various documents that

1 led up to the demand/supply planning strategy and have
2 not been looked at since?

3 A. Not in a complete plan analysis. You
4 obviously have seen that interrogatory that we have
5 been referring to, people have at times addressed the
6 question as to what sort of price increases would be
7 necessary to reduce demand to some degree or another.
8 So those matters and price elasticities are still part
9 of the load forecasting process and so on, but we had
10 not put forward a plan based on controlling electricity
11 demand by price increases above cost.

12 Q. Would you agree with me that the fact
13 that real price increases even greater than those were
14 apparently needed to reduce the need for new supply to
15 zero are now expected to occur mostly in the next
16 couple of years, makes all-price and all-demand cases
17 of the nature of plan P and AD out to be more
18 realistically capable of being considered as viable
19 options than they appeared to be in 1987 when the
20 decisions were made that these options should not be
21 further considered?

22 A. No.

23 Q. And is that because of what you just
24 said, they simply do not meet the demand planning
25 strategy that power must be priced at cost?

1 A. No, that's not the only
2 consideration.

3 Q. What other consideration?

4 First of all, sorry to interrupt, is that
5 a consideration and does it remain a consideration?

6 A. That is a consideration. If you go
7 to Exhibit 74, then page 27, strategy element 1.5 says
8 rates must continue to be based on costs, and page 28,
9 the last paragraph says, and I will read it:

10 The Power Corporation Act requires
11 that Ontario Hydro sell power at cost.
12 The principles of determining costs and
13 allocating them equitably among customers
14 have evolved over time, and are reviewed
15 publicly by the Ontario Energy Board.
16 The most extensive review was the
17 electricity costing and pricing hearing.
18 Any proposals to change rates to
19 encourage customers to alter their demand
20 for electricity should be consistent with
21 these principles.

22 And that is the rationale behind the
23 strategic principle. That's the reasons why that
24 strategy statement is there and that would not be
25 consistent with raising price above costs for the

1 purpose of reducing demand.

2 And that's one of the considerations in
3 my answer to your previous question.

4 Q. And what are the other
5 considerations?

6 A. I think the question was that given
7 that you have now had increases in the real price of
8 electricity, doesn't that make the adoption of a
9 strategy of increasing real price of electricity, make
10 it come closer to the realm of what should be
11 considered. I think I am paraphrasing your question
12 but I think that was the essence of it.

13 Q. That is the essence of it, given that
14 the price is now predicted to exceed what was
15 anticipated to be necessary.

16 A. And the increase in price that has
17 occurred has been because of increases in cost, and Dr.
18 Long has spoken to that.

19 The increase in price that has occurred
20 has been taken into account more or less in the load
21 forecast, and any protections of how much additional
22 price increase would be required to reduce demand would
23 be over and above what has already occurred. And we
24 have talked about the slight uncertainty as to the
25 degree to which the 1990 or '91 projections of price

1 have been taken into account.

2 But it seems to me that the common sense
3 point here is that with prices now being higher, then
4 it is quite likely that further increases in prices
5 would be even less acceptable rather than more
6 acceptable for the purposes of reducing demand.

7 Q. Acceptable to who?

8 A. To the customers of Ontario Hydro and
9 to the Ontario society at large.

10 Q. But wasn't the reason, the primary
11 reason, I think you just told us, for rejecting this
12 strategy was not customer acceptance, though that may
13 have been an element, the primary reason was that it
14 didn't meet Ontario Hydro's perceived test that power
15 must be based on cost.

16 MR. B. CAMPBELL: Just a minute, Mr.
17 Chairman. It's a little unfair to describe that as a
18 perceived test. It's a statutory requirement. I think
19 that's quite clear. I don't think that's quite a fair
20 description by my friend.

21 I might add, Mr. Chairman. It's one that
22 there is evidence on this record from the Premier of
23 the province that he has no intention of changing as
24 well.

25 MR. MONGER: Q. This may be a legal

1 question, but do you know, Mr. Snelson, whether the
2 power at cost means you cannot raise rates to do
3 something like pay down Ontario Hydro's debt?

4 MR. SNELSON: A. Well, the issue as to
5 what constitutes power at cost is something that's
6 really reviewed at the Ontario Energy Board, and I
7 couldn't add to the discussions that take place there
8 regularly and there are considerations there as to what
9 is the appropriate level of net income for reduction of
10 debt.

11 Q. I understand that this issue what is
12 discussed across the street as well, but would you
13 agree with me that cost under the Power Corporation Act
14 could include increases in rates to pay down debt?

15 MR. B. CAMPBELL: Mr. Chairman, there are
16 defined reserves under the Act and they are all part of
17 what constitutes power at cost under the Act. There is
18 a statutory debt retirement charge under the
19 legislation which Ontario Hydro is permitted to include
20 in rates under that legislation. This is very
21 definitely a legal question.

22 MR. MONGER: Q. Now, I was going to ask
23 whether -- I will ask. Would you agree that the shift
24 to planning to the median makes the use of part of the
25 price mechanism as part of your portfolio of options

1 more viable and... I will let you answer that
2 question.

3 MR. SNELSON: A. No.

4 Q. For precisely the same reasons as the
5 answer to the last question?

6 A. Essentially, yes. But we have
7 indicated in past studies that price increases required
8 to suppress demand that might occur in the upper load
9 growth were considerably higher than the price
10 increases that would be required to suppress demand
11 under median load growth.

12 Q. I agree that you have said that in
13 the past. But it seemed to me that, assuming for a
14 moment that the Power Corporation Act doesn't limit
15 you, if you were able to do that, would you agree with
16 me that the shift within Ontario Hydro to planning to
17 the median makes the use of price as a mechanism more
18 attractive or a more reasonable alternative?

19 A. The shift is to planning around the
20 median.

21 Q. I understand, excuse me.

22 A. And I have great deal of difficulty
23 speculating as to what would be the situation with a
24 different legal framework surrounding Ontario Hydro.

25 Q. Why is that? I mean, as planners you

1 considered plan P and plan AD, and I believe that the
2 Power Corporation Act was in place then. So at that
3 point you conceived these plans which you are now
4 telling us are impossible under the Power Corporation
5 Act, why is it now difficult for you to imagine that
6 alternative?

7 A. We did put forward a very wide range
8 of options in the demand/supply option study, including
9 the price induced demand reduction cases that you have
10 discussed. The result of that was that we put together
11 a draft demand/supply planning strategy which included
12 this strategy element that rates should be based upon
13 cost, with a similar rationale to what is in the final
14 demand/supply planning strategy. That draft strategy
15 was thoroughly discuss in front of the Select Committee
16 of the Legislature and they have the power, if they
17 wish, or the Legislature certainly has the power to
18 change the Power Corporation Act. There was no
19 requirement for a change in that part of the strategy
20 that came through that process, and that's as far as we
21 have taken it.

22 [12:15 p.m.]

23 Q. I understand all of that. I'm asking
24 you to imagine a hypothetical where the Power
25 Corporation Act does not apply. You have done it once

1 in the past in very substantial detail in plan P and AD
2 and I am asking you if you can try and do it again,
3 suspend this belief for a moment, imagine the Power
4 Corporation Act does not apply, if it does not apply.

5 A. My understanding of your question was
6 not whether you could suppress demand in these cases by
7 having higher price. My understanding of the question
8 was, under the current circumstances, if you were to
9 hypothesize that the Power Corporation Act did not
10 constrain this, would this be more desirable? And it
11 is the judgment as to whether it would be more
12 desirable that I am having difficulty speculating
13 about, because I have not thought through all the
14 factors and I don't think anybody else has in that
15 respect.

16 Q. So you cannot tell me whether
17 planning around the median makes the price mechanism a
18 more viable alternative if the Power Corporation Act
19 does not apply?

20 A. Well, this is a hypothetical
21 question, and as I say, we have not really addressed
22 that issue.

23 Q. Okay. We have seen through this
24 process that it is a very dynamic process that we are
25 involved in, and all kinds of things are regularly

1 updated. Is there any mechanism by which you as
2 planners, acting within your planning process, are
3 required to go back and re-examine previously rejected
4 options where some of the bases for rejecting the
5 options in the past have been removed by unforeseen
6 circumstances. I understand that the Power of
7 Corporation Act continues to exist, but --

8 A. If circumstances change, then we may
9 very well go back and say, does that introduce options
10 and bring options back into consideration that had
11 previously been rejected.

12 Q. Now, Mr. Shalaby told us in Panel 4,
13 in Volume 66, that the all-price case was rejected and
14 not carried on further in the planning strategy,
15 primarily, because of the large negative impact on the
16 economy of large price increases, and then he said
17 secondly, as in the memo from Mr. Rothman and elsewhere
18 in the documentation of those cases, we were advised by
19 those who know the impact of prices, and so on, that we
20 need to understand a lot more about prices before it
21 becomes a primary tool. He did not mention rejection
22 of the plan on the basis of the Power Corporation Act.

23 MR. SHALABY: A. The context of that
24 discussion, as I recall it, was within Exhibit 67 that
25 had a lot of plans presented. Plan P was discussed

1 shorter extent than other plans like AD or B or others.
2 And this answer was to say that we didn't carry that
3 into a fuller analysis even before the formulation of
4 the draft demand/supply strategy, primarily because of
5 those two reasons.

6 Q. The question, just so you have the
7 question you provided that answer to. The question by
8 Mr. Rosenberg was:

9 Mr. Shalaby, to use the Chairman's
10 words, the all-price and all-demand cases
11 did not end up in the Demand/Supply Plan.
12 Could you please identify what the
13 criteria were for excluding it at the
14 time that decision was made?

15 Nothing to do with the depth you looked
16 at it as part of the planning strategy, it had
17 everything to do with why it didn't continue on.

18 A. You now have three reasons, not just
19 one or two.

20 Q. Now, Mr. Snelson, are you aware
21 precisely in the documentation plan AD and P are
22 rejected on the basis of the cost principle, the rates
23 of cost or the Power Corporation Act limitation.

24 MR. SNELSON: A. The draft demand/supply
25 planning strategy and all the documents that we have

1 been discussing, that's the analysis of representative
2 plans, and you have been referring to the document that
3 talks about the financial effects of those
4 representative plans, all of that material builds into
5 this one document which is Exhibit 66. The draft
6 demand/supply planning strategy on page 11-3 discusses
7 the rationale for the strategy element which in this
8 listing is 1.5, rates must continue to be based upon
9 costs, and that's found on page 11-2 and the rationale
10 for that is bottom paragraph on the page 11-3 which is
11 substantially the same as the one I have read from the
12 final strategy.

13 Q. I understand that explains the
14 principle. What time asking you is where in the
15 documents plan P and AD are rejected on the basis of
16 that principle.

17 I can tell you that elsewhere in the
18 documents they appear to be rejected on the basis of
19 the negative impacts on the economy of real prices of
20 electricity of the magnitude that would be necessary.
21 Real drag on the economy I think is -- and the public
22 acceptability of real rate increases of 15 per cent.
23 But I can't find in the documents where it specifically
24 says the Power Corporation Act wouldn't allow the use
25 of this mechanism.

1 A. I don't believe, and I would have to
2 go back through all the documentation, that the price
3 approach was rejected solely on the basis of 15 per
4 cent increase in real prices.

5 My belief is that if you go back through
6 it you will find that the analysis of the degree of
7 electricity price increase that was necessary would
8 have ranged depending upon the load forecast scenario,
9 and that it would have been much higher in the upper
10 load growth scenario, and possibly quite moderate in
11 the median load growth, and possibly not required in
12 the low load growth scenario.

13 Q. That's fair.

14 A. And the judgements on whether a
15 planning approach should be continued would be based
16 upon the totality of the view across a range of load
17 growth scenarios, and not just on the view on the
18 median scenario.

19 So in suggesting that the all-price
20 approach had negative effects from an economic point
21 view, then there would have been weight given in that
22 sort of judgment to the upper load growth increases
23 which were perhaps doubling or some such relatively
24 high increase in electricity rates, as well as the
25 effect on the median load growth.

1 Q. Would you agree with me at the time
2 of formulation of the draft demand/supply planning
3 strategy, the primary reason for deciding not to study
4 plan P and AD further and carry them on as options was
5 not the Power Corporation Act implications, but was
6 rather the negative impact upon the economy?

7 A. I think that you have to recognize
8 that the demand/supply option study was done over a
9 period of time and the draft demand/supply planning
10 strategy was drafted at the end of that analysis period
11 with all of that analysis in front of them. And that
12 the strategy is based upon the analysis and also upon
13 the judgment of the people who were putting the
14 strategy together as modified by discussions throughout
15 the Corporation of people who were involved.

16 So the strategy is based on all of the
17 considerations that were known at the time it was being
18 drafted.

19 Q. Would you agree with me that the view
20 of the rate increases at the median that appeared to be
21 unacceptable during the draft demand/supply planning
22 strategy development have now actually occurred or will
23 occur in the next couple of years?

24 A. Certainly there have been, and we
25 have been over this several times, there have been

1 increases in electricity prices that are comparable to
2 the levels that were predicted under median load growth
3 in the price cases.

4 Q. Would you agree with me then that at
5 the median, the position that the rate increases
6 envisioned by plan P were unacceptable because of their
7 substantial upward pressure and the drag on the economy
8 that would cause has changed substantially?

9 A. Well, I think if you were at the
10 Ontario Energy Board over the last few years then you
11 would have seen, maybe you have been, that the
12 increases in real electricity prices above the rate of
13 inflation which have occurred and are projected to
14 occur over the next year or two, are not things which
15 are accepted lightly. They are things that are
16 reluctantly accepted based upon higher costs.

17 Whether that's acceptable or not, that's
18 dealt with through the Ontario Energy Board process. I
19 it's an entirely different question as to whether that
20 same level of rate increase would have been acceptable
21 without an accompanying increase in cost.

22 Q. Is there a chance that the historical
23 reasons, other than the Power Corporation Act, I
24 suppose, I am not conceding that that was the reason
25 that plan AD and P were rejected, but the historical

1 reasons particularly the effect on the economy have
2 been removed as a result of planning around the median
3 as a result of the greater recognized demand management
4 and fuel switching potential, and as a result of the
5 very significant change in projected real rates.

6 [12:35 p.m.]

7 A. I think I have got what it's all as a
8 result of, now I have forgotten what the first part of
9 the question was.

10 Q. I am asking you whether there is a
11 chance, whether there is a chance that the historical
12 reason, primarily being the drag on the economy of plan
13 P and AD has been removed by these other changes, that
14 that reason has been substantially affected?

15 A. I have a great deal of difficulty in
16 making a judgment as to precisely what level of rate
17 increase would be a drag on the economy.

18 Clearly, directionally the higher the
19 rate increase, then the greater likelihood that that
20 might have some impact on our economic development.
21 But the judgments in that area I think are more
22 appropriate for our economists.

23 Q. Okay. So I take it you are telling
24 me that you couldn't tell me what the effect of changes
25 in planning around the median and the increased demand

1 management and fuel switching potential and the
2 projected change in real rates, what the effect of
3 those changes would be on plan P and AD if they were
4 modelled today?

5 A. I think that comes back to the
6 question that you were discussing with Mr. Shalaby, as
7 to first factual question would be, what level of rate
8 increase would be necessary. And even in the approach
9 of planning around the median, that wouldn't limit the
10 discussion to planning at the median. It would have to
11 consider planning around the median and the range of
12 possible consequences that would come from that. As we
13 have indicated, we don't have a numerical result for
14 that.

15 To answer your question, you would have
16 then have to go to the next step of determining what
17 the effect on the provincial economy would be of that
18 increase in electricity rates, and we are not capable
19 on this panel, at this moment, of doing either of those
20 two things.

21 Q. Okay.

22 MR. SHALABY: A. Maybe I will add. That
23 the three things you enumerated as different, meaning
24 demand management and recent changes and the fuel
25 switching, are not the only changes that have taken

1 place between the mid-80s to now.

2 Application of price elasticity has to
3 consider our understanding of our future of customer
4 base and their use of electricity as well. And there
5 have been changes in the projections of what the
6 economy and what life in Ontario will be 20 years from
7 now. Factors to do with labour force participation and
8 growth in labour force, things to do with intensity and
9 the use of electricity. A lot of the assumptions that
10 were accepted in the mid-80s late 80s are now very
11 different. So even applying the same price increase to
12 today's models and today's circumstances may yield a
13 different result.

14 Q. That's what I would like to finish up
15 on, and I will get to that in just a moment.

16 The first question though is, would you
17 agree with me that a number of your options within your
18 response portfolio and your plan portfolio react
19 differently, more adequately whether you look at them
20 at median load growth or upper load growth?

21 MR. SNELSON: A. Yes, I believe there
22 would be differences in their degree of effectiveness
23 in different scenarios.

24 Q. To get to the final question. Would
25 you be willing to tell us, or are you able to tell us

1 how plan P and AD would perform if analyzed today using
2 an equivalent model to the one utilized in 1986 with
3 updated inputs?

4 We would like to know what price
5 increases would be required to keep demand below the
6 projected capability of the system, I guess as
7 analogous to plan P as possible, with the necessary
8 changes.

9 You were asking earlier for specifics
10 about whether we just meant major new supply or not. I
11 guess what I would say is, Manitoba Purchase shouldn't
12 be there because it wasn't there for plan P, major new
13 supply should not be there because it wasn't there for
14 plan P. Is that something you are able to do?

15 THE CHAIRMAN: First of all, that hasn't
16 been done, I take it, that particular analysis?

17 MR. DALZIEL: No, it hasn't.

18 MR. B. CAMPBELL: Mr. Chairman, you
19 should be aware that there has been, pursuant to when
20 this topic came up on scoping, there has been some
21 correspondence and I believe meeting is being organized
22 amongst intervenors to try and put together a small set
23 of cases that we would examine.

24 If my friend is leading towards
25 requesting some work of the type you have described, I

1 think that discussion ought to take in that process
2 which is under way.

3 THE CHAIRMAN: I take it, in summary,
4 that the reason why it hasn't been done is because it
5 is regarded as inconsistent with the strategy and
6 particularly the price element in the strategy.

7 MR. SNELSON: Yes, that is major reason
8 why it hasn't been done.

9 THE CHAIRMAN: Is that a satisfactory
10 solution, Mr. Monger?

11 I don't think you are going to get them
12 to say, no matter how long you try, that this is
13 something that they consider to be relevant to their
14 current planning because of the reasons that they have
15 given. That doesn't of course preclude you or your
16 clients from demonstrating that such an analysis not
17 only would be useful but might be persuasive.

18 MR. MONGER: I agree, Mr. Chairman. This
19 is rather where I expected we would be at the end of
20 today.

21 I think Mr. Campbell is probably right
22 that we should approach the group that is meeting to
23 have other LMSTM runs done, unless it's different.

24 Q. You have an existing set of data or
25 process that was done in 1986 for these plans, would

1 this be something that would be as onerous as a new
2 LMSTM run for model plans generally, or is it something
3 that could be done fairly easily, to tell us what would
4 be required today if models analogous to plan P and AD
5 were run today?

6 MR. SHALABY: A. They will not be
7 picking up cases that were run in 1986 and changing a
8 bunch of numbers. They will not be that simple, no.

9 MR. MONGER: Thank you very much, Mr.
10 Chairman.

11 Thank you, panel.

12 THE CHAIRMAN: Are you next, Mr.
13 Grenville-Wood?

14 MR. GRENVILLE-WOOD: Yes, Mr. Chairman,
15 but I am prepared to have a break now if its convenient
16 to you.

17 THE CHAIRMAN: I will do whatever you
18 prefer.

19 MR. GREENSPOON: It seems hardly worth
20 starting for 10 minutes.

21 THE CHAIRMAN: We will break and come
22 back at 2:15.

23 MR. B. CAMPBELL: Mr. Chairman, Ms.
24 Harvie will be appearing in my place this afternoon, if
25 I could be excused.

1 THE CHAIRMAN: Thank you.

2 We will adjourn now until 2:15.

3 THE REGISTRAR: Please come to order.

4 The hearing is adjourned until 2:15.

5 ---Luncheon recess at 12:50 p.m.

6 ---On resuming at 2:20 p.m.

7 THE REGISTRAR: Please come to order.

8 This hearing is again in session. Please be seated.

9 MR. GRENVILLE-WOOD: Thank you, Mr.
10 Chairman, Members of the Board.

11 I would like to start off by setting your
12 minds at rest. This is not Jeff Passmore in disguise.
13 My advisor today is John Theberge, who is a professor
14 of ecology in the School of Urban and Regional Planning
15 at the University of Waterloo and he has been involved
16 in park planning and wildlife issues in Ontario for
17 some 25 years. He will be advising me today. First, I
18 would like to, if I could, refer you to a section of
19 Volume 148 of the transcript of the direct-evidence on
20 page 26156.

21 CROSS-EXAMINATION BY MR. GRENVILLE-WOOD:

22 Q. Ms. Howes, I think you were answering
23 a question and if I can refer you to line 6, you were
24 at the time, I think, comparing -- I'm sorry, I think
25 it was Mr. Dalziel that was answering at that point.

1 Ms. Howes comes in right after. And the question was,
2 with respect to the options that you were discussing at
3 the time, and you said, nevertheless, line 6 and 7.

4 "Hydro believes that all of these
5 options are acceptably safe for
6 both the worker and the public."

7 The question that arises out of that
8 statement, that you made, was whether, in your
9 comparison of options, you considered the safety factor
10 in relation to the environment, per se, and to flora
11 and fauna; is that one of the considerations in your
12 comparison of the options?

13 MR. DALZIEL: A. The context of safety
14 here is with respect to worker and public health and
15 safety. So it is with respect to the safety to human
16 worker and public.

17 Q. All right. So in your comparison
18 scenario that you were dealing with, there was no
19 concern with the environment, per se, and not with
20 respect to flora and fauna, per se; is that fair?

21 A. I don't think we examined safety in
22 the context of flora and fauna.

23 Q. Okay. You don't answer my question
24 with respect to the environment; is that deliberate
25 or --

1 MS. HOWES: A. I was going to say that I
2 think perhaps those questions were more appropriately
3 directed to me on natural environment.

4 Q. Yes, I realize that, and I am going
5 to come to you very shortly.

6 A. Okay, I will wait my turn.

7 MR. DALZIEL: A. Humans are part of the
8 environment.

9 Q. Well, I agree with that. All right.
10 Now, Ms. Howes, maybe again, because I know the next
11 series of questions in the transcript were addressed to
12 you, the question that really comes out of the answers
13 you were giving on pages 26156 and 57, you were asked
14 about those five tables that were a summary of the
15 information that you had gathered.

16 The question that I wanted to ask you is
17 there any examination of the impact of the options on
18 the pristine environment, or even is there an
19 examination of the option of leaving things alone as a
20 baseline value.

21 For example, what I would call the
22 no-development option; was that examined in your
23 analysis?

24 MS. HOWES: A. The no-development option
25 was not examined. These particular tables referred to

1 the options that we were considering. And at a plan
2 level, it was my opinion that the environmental
3 characteristics that we looked at were appropriate. I
4 agree on a project-specific basis the effects on
5 pristine land is an appropriate consideration.

6 Q. Now, can you elaborate a little bit
7 what you mean by on a project level basis?

8 A. When we would be looking at siting
9 and when there was some geographic basic for the
10 discussion.

11 Q. But is it not correct to say that
12 certainly in some of your options that you were
13 considering they were about as site specific as you
14 could get?

15 A. In my opinion, the only site specific
16 one -- actually, there were no site specific other than
17 the existing stations or existing system. We did not
18 identify sites other than through illustrative or for
19 illustrative purposes.

20 Q. What about, for example, the
21 transmission requirements on the Manitoba Purchase?

22 A. I think that was dealt with in Panel
23 7 and certainly the environmental implications of those
24 transmission lines are subject to an separate
25 environmental assessment where specific environmental

1 characteristics will be considered.

2 Q. But in the context of your
3 comparisons that you did presumably, what I am hearing
4 you say, is that there was no analysis of impact on a
5 pristine environment or on a wilderness area by such
6 things as transmission lines; is that what I am hearing
7 you say?

8 A. No, in Panel 7, which was the panel
9 dealing with transmission, generic environmental
10 effects of transmission lines were discussed as well as
11 the natural environmental effects. In this particular
12 option comparison, as I am sure you are familiar, in
13 the land use section, the reference to transmission was
14 the number of hectares of land potentially affected by
15 the transmission corridor, and that was the extent of
16 the discussion at this plan stage.

17 Q. Okay, so assist me if you can, at
18 what point do we look at impact of the transmission
19 corridor on the land itself.

20 A. As I have said before, there is a
21 specific environmental assessment currently under way
22 for the transmission component for the Manitoba
23 Purchase in Ontario.

24 Q. That Ontario Hydro is undertaking at
25 the moment?

1 A. Yes, that's correct.

2 Q. And in the context of that
3 environmental assessment, presumably, are you in that
4 context looking at the no-development option or the
5 don't touch the land option?

6 A. I don't believe so.

7 Q. Okay. So what is your baseline then?
8 Where do you start off? I mean what is the underlying
9 sort of base from which you can measure comparative
10 options?

11 A. Essentially, the baseline for that
12 particular study is what currently exists. I'm not
13 sure that I would characterize that as no development
14 in all cases but the existing environmental is the
15 baseline for that study.

16 Q. Okay. Now, we were talking to some
17 degree about the Manitoba transmission line, I think is
18 where we are pretty well honing in.

19 A. I believe that's your question.

20 Q. Yes. And the existing environment
21 is -- where you are going to propose to site
22 transmission lines on wilderness areas then according
23 to what Mr. Snelson is advising you, then presumably,
24 that is the existing situation; is that what I'm
25 hearing you say?

1 A. Well, that wasn't the advice from Mr.
2 Snelson.

3 Q. Okay. What is his advice, don't
4 answer the question?

5 A. No, not at all. He was just
6 reminding me --

7 Q. I'm just teasing; it is all right.

8 A. The routing process was described in
9 some detail in Panel 7, and it is a process of
10 elimination to try and find an appropriate routing and
11 a broad area is considered, and it is very likely that
12 there were wilderness areas that were excluded from the
13 roots as part of the consideration of an appropriate
14 root. And as I said, that will be subject to another
15 EA review.

16 Q. I am just trying to see if I can
17 understand what you have just told me, because I am not
18 sure it is clear in my mind. It may be clear in
19 everybody else's, but in terms of the other options
20 that we are dealing with, put aside the Manitoba
21 Purchase for the moment.

22 Your comparisons, from what I can
23 understand from the transcript here, is a comparison as
24 between the various options, and basically, they are
25 emissions and how you deal with waste if that's

1 appropriate and so on. So they are compared to each
2 other, but is there any baseline comparison or baseline
3 standard against which you are comparing the options?

4 [2:30 p.m.]

5 A. I am not sure what you mean by
6 baseline standard. Could you please define that for
7 me?

8 Q. Well, I guess the baseline that some
9 people would apply, what can you do which would have no
10 impact on the environment, all right. That could be
11 your baseline theoretically. How can we do what we
12 have to do with no impact? Then if you can conclude
13 there is nothing you can do to meet your objective that
14 has no impact, then you get to comparing, I guess, the
15 least impact, which seems to me what you are doing, you
16 are comparing what you consider to be the least impact.
17 So that is what I am talking about, if that helps you.

18 A. Well, not particularly. But realize
19 that this has been a process that began with the
20 demand/supply option study and there was an
21 environmental consideration there. It then moved to
22 the demand/supply planning strategy stage. There was
23 an environmental evaluation. The next stage was the
24 plan stage and now we are in an update of the plan
25 stage.

1 There have been environmental
2 considerations and evaluations throughout this
3 particular series.

4 At this stage we were looking at options.
5 Some of some options as you are aware are demand
6 management options, other options are supply options.
7 And it was a relative comparison of the environmental
8 characteristics of those options that had fallen out
9 through the previous past planning process.

10 It is our position that it is most
11 appropriate at a project stage to look at, for example,
12 the implications of the emissions on the environment,
13 the wastes on the environment, and it is more
14 appropriately done at the next stage which would be a
15 site selection stage.

16 Q. Now, we are here looking at your
17 planning. This is what I am examining, I am not trying
18 to examine what in fact you will end up doing on a
19 site-specific environmental assessment. I am trying to
20 see in terms of your planning approach, and this is
21 what I am not completely understanding, is there ever
22 any time in the context of your planning that you say,
23 well, as part of this we have to consider a no impact
24 approach as one of the options we have to think about.

25 So if that is one of your options, I just

1 put a hypothetical to you, would it not be possible to
2 consider what you are discussing at great length this
3 morning, one of the no-impact approaches is to cut back
4 on demand through price mechanisms or other mechanisms?

5 A. I would challenge you that virtually
6 everything we do has an environmental effect. And even
7 if Hydro built no more generation within this province,
8 there would still be an environmental effect our
9 existing system.

10 Even if we were doing demand management,
11 as I have said in my direct evidence, there are
12 environmental implications of demand management
13 programs, of NUGs programs, of hydraulic, the whole
14 range of options that we are considering.

15 So the no-development option in my mind
16 is just, in the way that you have described it, just is
17 not reasonable.

18 Q. I grant you that. I don't think
19 anyone around the table here would say there isn't
20 anything that can be done that has no impact of some
21 kind or another. But we are looking at incremental
22 activities, I presume, and the question that remains to
23 me, at any rate, is what kind of examination in your
24 planning process you give to the option of, put it this
25 way, no more impact, if you want to say no impact, no

1 more impact. How about less impact?

2 In other words, is that option something
3 you, as a planner, look at?

4 A. I think we have described the range
5 of plans and planning questions that we evaluated, and
6 I don't believe that there was one that said there will
7 be absolutely no more development.

8 Q. Let me just wrap up this particular
9 area which is troubling me a little bit with one more
10 question.

11 In your analysis of options, what is your
12 method for comparing these incomparables I think you
13 said at some stage are very difficult to compare, in
14 order to assess what is in fact going to be the least
15 impacts?

16 A. I think you are right, I made it
17 quite clear in my direct evidence that in many cases
18 you are comparing apples and oranges, if I can use that
19 analogy.

20 Q. And even grapefruits sometimes.

21 A. Perhaps. And grapes and a whole
22 host.

23 Eventually there will have to be some
24 environmental trade offs made.

25 The basis for the comparison or the way

1 in which I attempted to facility a comparison was by
2 providing information on a per terawatthour basis so at
3 least trying to normalize some of the data that were
4 available. In the options comparison discussion in my
5 direct I tried to compare things back to a fossil
6 option so that you got a relative comparison across the
7 options that we are discussing.

8 Q. Can you explain to me a little bit
9 more. I didn't quite grasp it from your direct, quite
10 frankly. Can you just give a little bit more. How did
11 you go about this comparison to the fossil option and
12 how did you come out with preferences?

13 A. I don't think I stated preferences.

14 Q. No, but how do you come out with
15 preferences?

16 A. I don't think I stated preferences.

17 Q. I know you didn't. I am asking you.

18 A. I said there would have to be
19 environmental trade offs made, and I don't think I gave
20 a particular preference.

21 I suggested that if you were looking at
22 this fossil option, these are the range of emissions
23 that you would have to be dealing with. This is the
24 range of wastes that you would have to be dealing with.

25 Similarly for the other options where

1 there were no air emissions or whether they were
2 different, those were acknowledged in the options
3 comparison tables.

4 Q. I understood all of that. What I am
5 trying to figure out is, this is all information.

6 Maybe the way to approach this with you
7 is to say, okay, I grant you that you have to make
8 trade offs but how do you go about doing the trade
9 offs, what kind of process do you use for making those
10 trade offs?

11 A. I think what we have said,
12 particularly in this planning process, that at this
13 time we do not have to make a decision, for example,
14 about future major supply, and we are not making that
15 decision. There are many things that could change
16 between now and when we have to make the decision which
17 might cause us to make a slightly different decision.
18 And I think one of the items that there was a fair
19 amount of discussion on, for example, were CO(2) and
20 CO(2) emissions.

21 If there was indeed legislation, for
22 example, on CO(2) omissions, we might make a completely
23 different decision at that time than we would make
24 today.

25 So we have stated, I think, across the

1 panel that we will make the decisions when they need to
2 be made.

3 Q. Again, I am just having a little
4 difficulty in understanding, you are saying you don't
5 make the trade offs at this stage, you are going to
6 make them at some later stage. So it seems to me, I
7 don't know how you can plan, how you can look to the
8 future unless you in fact through the process of
9 planning, it might not be the decision you eventually
10 take because planning isn't a decision-making process
11 except in deciding what the plan is, how can you plan
12 unless you make the trade offs in the context of your
13 plan?

14 And really what I am trying to figure out
15 is, what is the base us for making the trade offs?

16 One thing I am understanding you to say,
17 well, if there is legislation that requires us to cut
18 back on CO(2) emissions that we can foresee, maybe
19 there is notice given that in three years you have got
20 to do this, in five years you have got to do the other,
21 then you can plan for it, that is fine.

22 But in the absence of that, presumably
23 you have to make trade offs in your own mind as a
24 planner as between -- well, an option which has X
25 number of units of CO(2) emissions, versus another

1 options which has X numbers of units of waste that has
2 to be dealt with, and there is a relative cost, cost in
3 dollars, there is a relative cost to the environment
4 and there is a relative cost in terms of maybe storage,
5 who knows whatever other factors may be at play. And I
6 am just trying to figure out how in your process you
7 address these matters?

8 A. I would say those particular issues
9 are more appropriately identified at a project-specific
10 basis.

11 You can appreciate that there is a fair
12 amount of ecological diversity across this province and
13 siting would have to obviously take into account that
14 particular set of information.

15 So to determine what the effect of SO(2)
16 would be on a provincial-wide basis I can address
17 regulation. On a site-specific basis I need the
18 information about that particular site in order to make
19 some evaluation to make the trade offs in those areas.

20 Q. So are you saying then in the
21 planning process you don't make the trade offs at all?

22 A. At this stage it's not a requirement.
23 For the approvals that we are seeking today there is no
24 requirement, for example, to make a trade off between,
25 for example, a fossil future or a nuclear future.

1 Q. Sorry, I was waiting for you. Were
2 you going to say something as a result of that
3 exchange?

4 A. No.

5 Q. No, Okay.

6 I must say I am very troubled by that
7 answer and I am troubled because it seems to me that
8 what -- we are here in front of an Environmental
9 Assessment Board, and if you are saying that the
10 Environmental Assessment Board is not to be given the
11 information as to how you go about trading off
12 environmental impacts from one generation mode as
13 compared to another, that only can be done in the
14 context of a site-specific where you have already
15 chosen an option on a site-specific project, it seems
16 to me that somewhere or other someone is missing the
17 boat, or some particularly important aspect or
18 environmental impact is being missed.

19 MR. SHALABY: A. I think throughout the
20 course of discussions on this panel and other panels,
21 we have shown concrete examples of trade offs that we
22 make and the rationale behind making those trade offs
23 and the choices.

24 Recent examples would be in implementing
25 demand management, we accepted the trade offs in the

1 area of inequity, for example, we accepted trade offs
2 in the area of higher rates in the short-term versus
3 benefits in the long-term.

4 In the area of the use of natural gas we
5 have accepted the potential risk of higher prices, and
6 given some of the short-term benefits of using natural
7 gas and the lower CO(2) and the lower other emissions
8 associated with it, we accepted a certain amount of
9 risk to do with pricing and deliverability.

10 Is that the type of trade offs that you
11 are looking for?

12 Q. Mr. Shalaby, it's not totally
13 surprising, you are referring to mainly economic trade
14 offs.

15 A. The environment in my mind and in the
16 definition of the Environmental Assessment Act includes
17 the economy, it includes people, it includes life in
18 the province, in all those aspects, not just the
19 natural environment. That is the perspective I was of
20 answering the question from.

21 Q. You know where I am coming from, I am
22 sure I don't have to draw you any pictures.

23 But it seems to me that the examples you
24 have given are almost exclusively to the exclusion of
25 the natural environment. What I was understanding from

1 Ms. Howes in --

2 A. Even that is not correct. I am
3 saying natural gas has air emission advantages to other
4 fossil fuels and we accepted higher price and higher
5 risk in favour of, in part, the natural environmental
6 benefits and in part the flexibility benefits and so
7 on.

8 Q. You will recall when the issue of
9 fuel switching to natural gas was raised, we were
10 asking questions about whether in fact you weren't
11 trading off to another supplier, the greenhouse gases
12 that would arise out of natural gas use, and I think
13 whoever it was who answered the question agreed. It's
14 less, but nevertheless there is a greenhouse emission
15 arising out of that activity.

16 The area of questioning I am getting at,
17 and I agree, it's much more easy to talk about economic
18 trade offs because they are given a monetized - to the
19 use the phrase that's in common currency around these
20 hearings. But the question I think relates to how
21 in -- because this the planning process. This is where
22 I presume in the context of plans you make the trade
23 offs. You plan to say, well, we are going to be doing
24 more in this as opposed to that because of... and all
25 we have heard of most of this panel and others is that

1 the economic analysis. And I am just wondering where
2 the environmental analysis is. I am still hearing that
3 there isn't very much.

4 MS. HOWES: A. Then you are hearing
5 incorrectly.

6 Q. Then please inform me.

7 A. I have tried to inform you. I have
8 given you references to my direct evidence. There
9 certainly have been documents. The environmental
10 analysis document, for example, predates the Update, it
11 gives a review of the environmental options, it
12 compares across the plans and it does attempt to make
13 some trade offs. The Update itself is an extension of
14 that particular plan. There is a comparison of the
15 plans that we reviewed from an environmental
16 perspective in that particular document, or in my
17 direct evidence, excuse me.

18 Q. I have read your direct evidence very
19 carefully. I am looking at it here and I agree with
20 you, you look at the various impacts, and all I am
21 trying to understand from you is just how you -- you
22 have identified them has apples and oranges, and I am
23 just trying to figure out if there is some way that you
24 have devised for trading off as between them?

25 A. As between what?

1 Q. Well, let's say has between CO(2)
2 emissions and waste?

3 A. What are the environmental
4 implications of CO(2) emissions?

5 Q. You tell me, you are the expert.

6 A. I can't tell you what those are. And
7 I think probably the scientific community is out, for
8 example, as to what the implications of certain CO(2)
9 emissions levels are. I can't make a judgment based on
10 no information.

11 I could potentially tell you what
12 environmental impacts of SO(2) might be in the
13 province, the effect on acidity on lakes, et cetera.
14 My reference point there was current regulation and
15 anticipated future regulation.

16 I discussed the scientific basis for that
17 particular regulation and our attempts to meet those
18 future regulations.

19 I also talked about the trends in our
20 emissions over time on a per terawatthour basis to give
21 some sense of what the effect of the plans would be on
22 a provincial basis over a 25-year period.

23 The interpretation of SO(2) emissions,
24 for example, on crops or buildings or whatever, as I
25 said, is a more appropriate for a project-specific

1 evaluation.

2 Q. I am not quarrelling with you.

3 MR. SHALABY: A. Let me give an example
4 that could be close to what you are looking for here.

5 We accepted a trade off between acid
6 gases and solid waste, for example. The plans we are
7 putting forth accept a large volume of solid waste that
8 is associated capturing acid gases before they escape
9 through the stacks.

10 So I think the trade offs you are looking
11 for can be demonstrated area by area in the plan. We
12 accepted higher solid wastes, higher expense, to avoid
13 acid gas emissions into the atmosphere.

14 Is that the kind of thing you are looking
15 for?

16 Q. We are getting there, which I am
17 grateful.

18 But in the context again of what option.
19 I think the difficulty I am having, and maybe it's only
20 me, is as between options.

21 A. Between options it is a difficult
22 area, and in the 1989 Demand/Supply Plan we put charts
23 that show if you are comparing the fossil options to
24 the nuclear options there are characteristics that are
25 aggravated in one area and reduced in one area, and on

1 the other hand, you go the opposite side if you go the
2 other way.

3 And, frankly, we don't know what the
4 right answer is. Some people would prefer more of this
5 and less of that, and others would prefer it the other
6 way. And we put in front this Board at the time plans
7 that go a little way this way and plans that go a
8 little this way and said, they are different and the
9 judgments involved in making the choices would be
10 different. People will bring different judgments and
11 different trade offs to those.

12 Q. Let me put another question to you,
13 would it be easier for you to do those trade offs that
14 we are talking about if we had a method by which we
15 could look at external costs and give them some sort of
16 a value which you could then throw into your mix so
17 that you can make, in fact, valid comparisons as
18 between the environmental impact of various options?

19 A. That's an area that we discussed at
20 length as to the potential benefits of that method and
21 the potential shortcomings of that method. And the
22 position Hydro takes in this area is well documented
23 and it's been gone over several times.

24 Q. It's my understanding that you are
25 conducted studies about internalizing external costs

1 such as environmental impacts; is that correct?

2 A. Yes.

3 Q. And would those studies, presumably
4 if the they come out with some useful, would that
5 assist you in making these trade offs?

6 [2:50 p.m.]

7 A. Yes.

8 MS. HOWES: A. It could well. One does
9 not know what the outcome is going to be, but it could.

10 MR. SHALABY: A. Another area of trade
11 offs in the reports that discuss the potential health
12 impacts. There were quantified risk to the public, for
13 example, about the fossil option.

14 One can go at comparing options from
15 perceived risk to the public and we discuss how to
16 interpret that risk, and it is not easy when you
17 interpret the risk of cancer to the general population
18 over a period of time, compare that from one option to
19 another, it gets to become abstract and the data and
20 the validity of the data gets to becomes uncertain at
21 times.

22 Q. But you are not trying to tell me
23 that there is any greater uncertainty in that kind of
24 data than there is some of the economic data that you
25 people have put forward over the last 14 months?

1 A. There is uncertainty in all of the
2 data.

3 Q. Absolutely. So we are all dealing
4 with uncertain data?

5 A. Yes.

6 Q. I don't want to put words in
7 anybody's mouth, and if I do, spit them out right away.
8 My understanding of your analysis - I know you will,
9 Mr. Shalaby - my analysis of the direct testimony in
10 this area, with respect to impacts on land, per se, is
11 that your comparative analysis has really been based on
12 the amount of land required to serve, if that is the
13 word to use, any of the facilities in your options and
14 it does not go beyond that in terms of impacts on land
15 in a kind of land use analysis?

16 MS. HOWES: A. That is correct. We just
17 looked at, I think, the land area required for waste
18 station area, land for mining, et cetera.

19 Q. So, again, there is no analysis made
20 of the importance of land in it's own intrinsic value
21 as to what use it already had before you started
22 working on it?

23 A. No.

24 Q. And in your analysis, as well, have
25 you done any analysis on the impact, direct or

1 indirect, of the plan? In other words, have you looked
2 at not just the area required but the area impacted
3 directly or indirectly by any of the activities under
4 your options?

5 A. No, we haven't because that is done,
6 in our opinion, more appropriately at a site-specific
7 stage where you are identifying the affected area.

8 Q. Okay, again I don't want to come back
9 to this, because I think we have dealt with it in
10 sufficient -- I won't say in sufficient detail but for
11 a sufficient length of time. Surely you would agree
12 with me in saying that certain options that you have
13 looked at have an indirect impact that covers a wider
14 area of land than other options?

15 A. Could you give me an example of what
16 you are thinking about?

17 Q. Well, a very simple example is that
18 if you are locating a coal fired generation plant or
19 something along the nature of a small hydro facility or
20 something like that, the impact of that activity, of
21 those two activities, is different on the land
22 surrounding, not just the land that it was required to
23 serve the facility, but the indirect impact on the
24 surrounding lands. Depending upon the nature of the
25 option you use or the generation or plan or project you

1 put forward.

2 A. I would agree there are differences
3 between coal fired and hydraulic stations, for example,
4 in a coal fired you would have to look at long range
5 transport of emissions, for example. In hydraulic you
6 would be looking at size of reservoir and other
7 factors.

8 I think, as a part of Panel 6, we did
9 file a document called Natural Environment and Health
10 Affects of Hydraulic which goes into much more detail
11 with the natural environmental affects of hydraulics
12 are, hydraulic stations, generically. The same with
13 fossil and the same with nuclear and that gives a much
14 broader perspective of potential land use implications
15 on a generic basis not on a site-specific basis.

16 Q. Again, in the context of the direct
17 evidence you gave here, again in the context of
18 planning, what analysis have you made on the question
19 of impacts on land other than air and water pollution.
20 I give you as an example, again, there is the whole
21 issue of wilderness areas, parks. Surely I think you
22 will agree with me that many of the options that you
23 are putting forward are either going to have
24 transmission lines through, or they are going to, for
25 the purposes of reservoirs, have to flood certain of

1 those kinds of areas. Now, the question, I guess is,
2 is there anywhere where you have done impact studies on
3 those kind of lands?

4 A. The first thing I would like to say
5 is with respect to hydraulic plan. I know that in
6 Panel 6 there was some discussion about the exclusion
7 of certain areas of the provinces, certain rivers, et
8 cetera, because they were heritage rivers or there was
9 some affect on parks and I think we have answered an
10 interrogatory in this regard to you.

11 As well, the conclusion of or the
12 consideration of wilderness areas, parks, et cetera, is
13 more appropriately done at a site-specific area. I
14 know that those factors are certainly well considered
15 as part of transmission projects and it is certainly
16 well considered as part of generation projects.

17 Q. I think it is a nice easy answer to
18 give me that these considerations are looked at in
19 site specific. But the whole point of this discussion,
20 is how to do we plan? How should Hydro be planning?
21 And again we have talked about trade offs, we have
22 talked about making choices and that is surely what
23 planning is intended to help people to do.

24 THE CHAIRMAN: Just a moment. Wilderness
25 and parks were excluded from the hydraulic plan, and

1 that I suppose was part of the planning. That part was
2 out. That was gone into in quite a bit of detail in
3 Panel 6 and I would think that it was a planning
4 matter. They are not part of the hydraulic plan.

5 Now transmission, it has to be site
6 specific. I don't see how it could be anything else.
7 You cannot talk about the generic nature of
8 transmission and its affect on wilderness very
9 adequately, I don't think.

10 The evidence in Panel 7, as I understand
11 it, was that every effort is made to be sensitive to
12 all these concerns when they decide how they are going
13 to route a transmission line. But when it finally
14 comes down to the end, if you are going to have a
15 transmission at all, it has got to be somewhere.

16 MR. GRENVILLE-WOOD: Well, I think the
17 point, Mr. Chairman, I agree it has to be somewhere,
18 but in the planning process the fundamental question
19 has to be asked in terms of trade offs.

20 Q. The question really is essentially
21 whether or not such factors, as we have just discussed
22 in the generic sense, because you know it is going to
23 have impacts and you know, at least in terms of major
24 transmission from the Manitoba Purchase, for example,
25 that you are going to have to cut across certain kinds

1 of lands. And the issue to me, at any rate, I am
2 trying to get some understanding, in the planning
3 process those impacts, to what extent are they analyzed
4 and examined as a planning exercise?

5 MS. HOWES: A. They are extensively
6 analyzed as part of the planning process for the
7 transmission corridor and indeed it is the subject of
8 the environmental assessment of the transmission
9 component of the Manitoba Purchase. I believe that we
10 have adequately dealt with those issues as part of the
11 route selection process.

12 DR. TENNYSON: A. If I could just add to
13 that, if you look at the evidence presented on Panel 7.
14 I was on Panel 7 to my recollection. The various
15 factors, the criteria, how the situations are examined,
16 how trade offs are made with extensively discussed and
17 that clearly is a planning process. And it is at a
18 project specific planning process, how we do it, how
19 decisions are made, and how trade offs are made. So, I
20 think many of the questions that you have been asking
21 will be addressed by reviewing that evidence.

22 Q. So, then I take it then to draw from
23 that, in the generic planning process that we are
24 involved in here, you are not capable, because it isn't
25 specific enough, to do the kind of analysis I have been

1 discussing?

2 MS. HOWES: A. I would say it is
3 probably not appropriate to do it at this stage. It is
4 more appropriately done on a project-specific basis if
5 we are looking specifically at transmission as an
6 example.

7 Q. Again, to come back to impacts on a
8 different aspect, and again dealing with land, I would
9 like to understand how you, in your process, deal with
10 the concept of cumulative impacts on land. For
11 example, the impact of multiple dams on aquatic
12 ecosystems, that is just one possible example. How do
13 you deal with that? Again, are you going to come back
14 to me and say that is a site-specific issue?

15 A. Something very close. We discussed
16 cumulative impact assessment, I guess in some detail,
17 over the last couple of days. We had discussed some of
18 the difficulties of doing cumulative impact assessment
19 at this point. The state of the art is relatively at
20 an early stage and I had further stated that as part
21 the co-planning exercise for the Moose River Basin,
22 Hydro had made a commitment to do a cumulative impact
23 assessment as part of that river basin consideration.

24 [3:05 p.m.]

25 Further, I had indicated that Ontario

1 Hydro was participating with the federal government and
2 the Rawson Academy as two examples to learn developed
3 techniques and methodologies to assist in the
4 development of cumulative impact assessments.

5 Q. Okay. So my understanding then is
6 that in the context of the Update and the Plan itself,
7 your state of your art is not sufficiently refined to
8 be able to address those issues yet?

9 A. What I said in my direct evidence as
10 well is that on a temporal basis over the planning
11 period, we made an attempt to identify what the
12 emissions were over the planning period to get some
13 sense over a time frame of what the changes would be
14 from an emissions, effluents and waste perspective.

15 Q. Again your focussing on effluents,
16 waste and emissions, not on --

17 A. We looked at total land use well.

18 Q. You did?

19 What did you conclude from the land use
20 analysis because I don't remember it being discussed in
21 your direct evidence in any detail.

22 A. I referred to figures, I think it is
23 452G... 452G, I believe, that shows graphically across
24 the plans the difference in land use, for example.

25 Q. You indicated to me earlier that your

1 only analysis of land use was in acreage rather than on
2 impact.

3 A. That's right. That's right. It's
4 total land used across the plans.

5 Q. But in terms of acreage, not in terms
6 of impact.

7 A. That's right. Number of hectares.
8 It's 452E and G.

9 Q. Okay. But the point is, it's not
10 environmental impact, it's acreage used?

11 A. That's right.

12 Q. And from my understanding it makes no
13 accounting of what the previous land use was. It is
14 just if we are going to have a dam, it's going to use
15 so many hectares, if it's this it's going to use so
16 many more or so many less, and it's a question of land.

17 A. I would argue that that would more
18 appropriately be done on a project-specific basis where
19 you have some land reference points.

20 Q. I understand what you are saying to
21 me about site-specific analyses and the requirement to
22 look at these things in greater detail.

23 What I frankly can't understand is how,
24 as a planning exercise, you can't spend more time on
25 analyzing the environmental impact of these activities.

1 We have had huge and lengthy discussions
2 about economic impacts, and so on, but the
3 environmental impacts in an environmental assessment
4 planning hearing you keep saying, well, we have to look
5 at it in a site-specific kind of sense.

6 A. I think it is reasonable to suggest
7 that there has to be some geographic reference points.

8 Q. I agree with you, there have to be
9 some geographic reference points. But do you not agree
10 with me that there are some generic impacts that are
11 intrinsic to whichever of the options you choose and
12 should they not be analyzed for the environmental
13 impact in a generic sense?

14 A. Could you have give me some examples
15 of what you had in mind?

16 Q. I don't have to draw you pictures,
17 you know exactly what I mean.

18 A. I am afraid I don't. If you can help
19 me out I will try and give you a reasonable answer.

20 Q. Are you not telling me that when you
21 have a transmission line you know what kind of impacts
22 that will have, when you have a dam you know what kind
23 of impacts that will have, when you site a nuclear
24 generating station you know what kind of impacts that
25 will have, when you have a coal-fired generation plant

1 you know what kind of impacts they will have. You
2 don't have to have geographic reference points, or you
3 can put some of geographic reference point parameters
4 around those kinds of options and analyze the
5 environmental impact of them and try and see which has
6 the least impact, or maybe the greatest environmental
7 benefit; is that impossible?

8 A. As I mentioned, there are three
9 documents filed with this particular hearing that do
10 look at hydraulic, fossil and nuclear options, and from
11 a generic point of view describe what the natural
12 environmental effects are.

13 Q. Okay, I know that.

14 The question then comes back in terms of
15 the planning process and how you go about preparing
16 your plan from an environmental perspective. How do
17 you bring those three documents that you just referred
18 to together and make some kind of an analysis of what
19 is the impact and what therefore should be the decision
20 over the long to medium, medium to long-term that ought
21 not be taken by the organization for which you are
22 working?

23 A. You recall of course that we are
24 looking for very specific approvals in this particular
25 process, and we are looking for approvals for the

1 hydraulic plan, and we are looking for approvals for
2 the need and rationale for the transmission component,
3 and those are the matters that are before this
4 particular Board.

5 The issue of medium and long-term will be
6 discussed at a later date, I think Mr. Snelson has
7 discussed in a very generic sense ongoing plan
8 approvals and review processes.

9 Q. Have you heard of the phrase,
10 destruction of the environment in insignificant
11 increments?

12 A. Yes, I have.

13 Q. Okay. With respect to, for example,
14 the NUG option that I know has been changed since we
15 started this process, but in any event let's just look
16 at it in the context of planning.

17 Is there anything that you have discussed
18 in this panel, and for that matter in earlier panels,
19 that would allow the Board to understand or get an
20 overall picture of how the NUG portion through
21 approvals of incremental projects, that we could
22 contribute substantially to changing the character, for
23 example, of, let's say, Northern Ontario. I am not
24 phrasing the question very well. Maybe I should try
25 again.

1 Little small hydro projects, for example,
2 have you looked at the impact of a NUG plan in its
3 cumulative sense, and I think we can identify probably
4 where it would make sense for small hydro, just to take
5 an example, how the cumulative impact of a lot of NUG
6 plans would change the environmental characteristics of
7 any particular part of the province?

8 A. The extent to which we discuss NUGs
9 or there are graphs in 452G and E which look at
10 emissions and effluents associated with these
11 particular NUG developments that we assume for planning
12 purposes. We have not looked at a site-specific
13 evaluation of dispersed NUGs, for example, on the
14 environmental integrity of Northern Ontario.

15 Q. You say you haven't done it. Is it
16 something that you think ought to be done or ought to
17 be examined?

18 A. By Ontario Hydro?

19 Q. Who else?

20 A. Well, perhaps the NUG developers
21 themselves, they too are subject to the environmental
22 regulations of the Province.

23 Q. No, I am talking about -- because, I
24 mean, essentially we are talking about an option under
25 your plan, and the issue I guess is whether or not

1 again in looking at various options that are in front
2 of you, whether or not you wish to have an
3 understanding of the impact of those options on the
4 environment?

5 A. Well, I think we have provided a
6 generic discussion of the impacts of small hydraulic
7 and some gas-fired CTUs, for example, on the
8 environment and have compared them to larger options
9 that Ontario Hydro is considering as well to other
10 options that Ontario Hydro is considering, and to that
11 extent we have looked at the environmental implications
12 of those developments.

13 Q. But have you looked at them in the
14 cumulative sense? In other words, you may look at them
15 in the discrete sense of each projects, but have you
16 examined of the cumulative impact of several?

17 A. Within a geographic area?

18 Q. Within a geographic region or across
19 the province?

20 A. No, we have not.

21 Q. Across districts within the province.

22 No, okay.

23 MR. SNELSON: A. You may be aware, you
24 are talking about many small hydroelectric
25 developments, you may be aware that there is a process

1 under way which Ontario Hydro is assisting with to
2 prepare a class environmental assessment for a small
3 hydraulic non-utility generation, and that may be an
4 issue that is addressed through that process, I don't
5 know, but it may very well be an issue addressed
6 through that process.

7 Q. I understand that. The question
8 again is in the context of when you are preparing a
9 plan.

10 I think we are looking at not only the
11 specific approvals that you are asking for, but at the
12 planning process that has brought us here today and for
13 a number of months yet to go, I would think. You
14 notice I didn't say years.

15 I suppose we are all learning by this.
16 The sense of these questions is not only just to try
17 and find holes in what you have done, but to try to
18 understand what obviously still needs to be done from
19 my client's perspective, so I think that's important.

20 Now, in the context of land use planning
21 generally, and I want to ask you a few questions with
22 respect to how you have approached the issue, is it
23 fair for me to say that your plan, the DSP and its
24 Update, is essentially a Hydro plan, a single purpose
25 plan that is in place to achieve Hydro's objectives?

1 Is that a fair way of putting it.

2 MS. HOWES: A. No, I don't think so.

3 Q. Okay. Be more fair then.

4 A. I would suggest that it reflects in
5 part our customers. I would expect that because of
6 this review process it might have a broader perspective
7 than just an Ontario Hydro perspective.

8 Q. Now, I am sure you are aware of other
9 plans that are either in the process of preparation or
10 existing with respect to land use in the province?

11 A. Yes, I am aware of some of them.

12 Q. Have you heard of, for example, the
13 strategic land use planning document that's produced by
14 the Ministry of Natural Resources known as SLUP?

15 A. Yes, I am familiar with SLUP.

16 Q. An awful acronym.

17 Now, under the SLUP plan, I am sure you
18 are aware of the fact that land uses have already been
19 designated for Ontario Crown lands.

20 A. That's correct.

21 Q. Okay. And are you aware of the
22 resource targets that are outlined in these plans?

23 A. Yes, and I believe that we have
24 answered an interrogatory in this regard for you, to
25 you.

1 Q. Yes, okay. Within the context of
2 those plans, Ontario has put down targets, for example,
3 resources harvesting on all sorts of resources, wood
4 and so on.

5 Have you done an analysis of the impact
6 of the DSP and the Update on these particular areas
7 that are identified in the SLUPs?

8 A. As you are familiar, the SLUPs are
9 gone on a regional and district basis, and they are one
10 of the first things that we look at when we are doing
11 project-specific studies, and we definitely involve the
12 Ministry of Natural Resources and its regional people
13 in our transmission projects as well. So yes, we are
14 very familiar and use these in planning at our
15 project-specific level.

16 Q. Okay. So then again in the context
17 of this, the DSP and the Update, am I hearing you say
18 that the SLUPs were not taken into account?

19 A. No, because it is our opinion that it
20 is more appropriately done on a project-specific basis.

21 Q. Even where it is clear from your own
22 decisions and identification of possible sites or
23 various activities, that it is clear that you are going
24 to have to have in some way other another an impact on
25 some of these areas. You figure that is for a later

1 hearing?

2 A. I think it is for appropriate
3 consideration at a project-specific basis where there
4 is a geographic basis for the considerations.

5 The guidelines vary across the province.

6 Q. I understand that.

7 So when we get down to looking at your
8 planning process, if I can understand where we have
9 gone so far on this cross-examination, what I am
10 beginning to understand is that in terms of
11 environmental impacts, correct me if I am wrong,
12 please, you can't really analyze these in any kind of
13 way that would be useful from your perspective except
14 in the context of site-specific projects, and that
15 really the only analysis you can make is on very broad
16 brush impacts that you can clearly identify as not
17 being related to a particular site.

18 Now, is that a fair way of describing
19 what you have said?

20 A. No. I would say at the plan stage we
21 were looking at identifying the environmental effects
22 of a variety of options and doing a relative comparison
23 across the options, and the same was true for the
24 plans. The plans were evaluated and a relative
25 comparison of the environmental effects of the plans

1 was undertaken.

2 We are fully aware that the next stage is
3 necessary to look at the impact of those effects on
4 specific geographic areas in the province, and it is
5 our opinion that it is more appropriately at
6 project-specific basis when there are sites.

7 Q. Is it a logical conclusion to draw
8 from what you have just said that really we are not
9 looking at an environmental assessment at all. That we
10 are looking at an economic assessment, and that the
11 only way you can look at the environment is on a
12 project-specific basis?

13 A. No, I disagree with you.

14 Q. Well, that's what I am hearing you
15 say and that's what is troubling me and I really don't
16 understand how you examine -- I mean, you have made
17 some very broad brush statements about emissions and
18 you can't compare one to the other, they are apples and
19 oranges, so we leave that to site specific.

20 And really as an environmental assessment
21 hearing I am quite troubled by the lack of specificity,
22 if that is a word that can be used, of the analysis of
23 the options, and more specifically on their potential
24 impact on land and land use.

25 A. Was there a question there?

1 Q. Yes, there was. But if you want me
2 to rephrase it--

3 A. Perhaps.

4 Q. --I can raise my voice at the end of
5 it and see if it makes a question.

6 I guess I am saying to you and I would
7 like your comment on it, is maybe a different way of
8 putting it, that as the environmental expert on this
9 panel, what I am hearing you say is that apart from
10 fairly broad brush environmental analysis, the detailed
11 analysis has to be done on a site-specific basis;
12 correct?

13 A. I think that's fair.

14 Q. Okay. Therefore, as a plan is it
15 also therefore fair to say that this is not an
16 environmentally-sensitive plan, it's an economically-
17 sensitive plan?

18 A. No, I would disagree.

19 Q. Okay. If you disagree with that
20 statement, tell me how it is that the intervenors, the
21 Board, can assess your options and make some judgments
22 about them on an environmental basis?

23 A. I think I feel that the information
24 that we have provided is adequate to make the decisions
25 necessary from an environmental perspective.

1 Q. Well, you have just finished telling
2 me that that's based on a comparison of apples and
3 oranges which is not comparable, and you have also told
4 me that you can't analyze the specific environmental
5 impacts without geographic markers. So how can you
6 tell me at the same time that that's adequate?

7 [3:26 p.m.]

8 A. I think it is adequate for the
9 decisions that are required from this particular
10 hearing. We have always stated that there needed to be
11 a next step to look at site selection. There needed to
12 be environmental assessments of specific projects with
13 geographic basis.

14 Q. All right. So we then know that
15 there is going to be, for example, if the Manitoba
16 Purchase issue goes forward that this Board will
17 presumably give you an approval or not on the rationale
18 or requirement for the Manitoba Purchase. But you are
19 saying that the Board does not --

20 THE CHAIRMAN: Technically, it is the
21 transmission part that we are looking at.

22 MR. GRENVILLE-WOOD: Yes, yes, I'm sorry,
23 that is correct. But we also know that that
24 transmission is not going to go on some weird and
25 wonderful meandering route. We have a pretty good idea

1 that it is going to go in certain areas. So, I don't
2 want to get into a debate about, you know, what is a
3 site-specific hearing and what is the generic hearing
4 that we are doing today.

5 MS. HOWES: But there is an environmental
6 assessment under way for the route selection for that
7 transmission component, and it will be subject to
8 review as well. And it is currently under way.

9 MR. GRENVILLE-WOOD: Q. Okay. I think
10 the question, I guess, arising out of that is, if this
11 Board is being asked to approve the transmission, and
12 that we know that there is a certain limit to the range
13 of options for the transmission, it seems a little
14 disingenuous, if could -- without being rude.

15 To then say, well, we cannot look at the
16 impact of this in this hearing; we have to have a
17 specific -- site-specific hearing, well we know, don't
18 we, that there is going to be impact on wilderness
19 areas, there is going to be impact on areas that have
20 specific land uses that are already have been
21 identified.

22 THE CHAIRMAN: I think we have gone
23 through this pretty well before. And I think they have
24 given the answer. It may not be very satisfactory
25 answer, but I think that you will just have to accept

1 it. That is their answer. That they have gone into
2 these things, that they have given evidence in Panel 7
3 about them, and about the route selection and the
4 generic effects of the transmission and matters of that
5 kind.

6 They have been all gone into, and it has
7 been, in their view, ample evidence put before this
8 Board to enable us to make a decision. Now, you may
9 not agree with that and you may bring evidence to the
10 contrary, but I think that is their position.

11 MR. GRENVILLE-WOOD: Yes, thank you, Mr.
12 Chairman. That was just an illustrative -- taking that
13 as an illustration of the fact of the proposition I was
14 putting a moment ago about the lack of environmental
15 impact detail in the plan and in the planning process.

16 THE CHAIRMAN: Yes, they say that there
17 is abundant detail and you say there isn't, and you
18 seem not to be able to cross purposes in that. I do
19 not know what detail you think is missing except that
20 you have referred to the land use aspect and they have
21 answered that, told you what they have and what is
22 there.

23 MR. GRENVILLE-WOOD: No, that is fine, I
24 agree.

25 THE CHAIRMAN: Now, if there are other

1 areas where you think the information is insufficient,
2 I guess you should tell Ms. Howes where you think the
3 information is insufficient and she can perhaps answer
4 that. You have pointed out that there are no specific
5 methodology for comparing one set of environmental
6 circumstances with another, and that is another matter
7 that which I suppose is of concern.

8 I understand that. I mean, I am not
9 saying that there are not matters of concern. I am
10 just saying I think that is what they have done the
11 best they can to tell you what they have done.

12 And Ms. Patterson tells me it is time for
13 the break. [Laughter].

14 With that, we will take 15 minutes.

15 ---Recess at 3:30 p.m.

16 ---On resuming at 3:52 p.m.

17 MR. GRENVILLE-WOOD: Thank you,
18 Mr. Chairman.

19 Q. Are you familiar with the notion of
20 ecological land classification?

21 MS. HOWES: A. I assume this is
22 addressed to me, right?

23 Q. I am looking right at you.

24 A. Yes.

25 Q. Therefore, you would be aware of the

1 fact that the federal government has identified various
2 land classifications, different segments of the country
3 have been divided into different land classifications?

4 A. I'm familiar to some extent. I
5 recognize that there are those mapping processes for
6 agriculture land and forestry, land et cetera.

7 Q. Well, I mean, for example, there is a
8 hierarchical set of levels of interpretation, and they
9 go from eco-zones to eco-province and eco-region within
10 the province, eco-district within the province and
11 there are even finer subdivisions within each of those.

12 A. I am not sure how much information is
13 available on a provincial basis, but, yes, I was
14 familiar with the term.

15 Q. Having your general familiarity, I
16 presume then that you would be aware of the fact that
17 certain ecological characteristics would make some
18 ecosystems more vulnerable than others.

19 For example, it would be to an ecological
20 classification, you turn to learn about permafrost,
21 dependent communities, or where you have the sensitive
22 bogs and so on. You would be aware of being able to
23 refer to that kind of classification system?

24 A. To get that information?

25 Q. Yes.

1 A. Yes.

2 Q. Now, would you not, therefore, in
3 terms of again, planning. Would you not need to
4 examine those kinds of classification systems in order
5 to find out where you may be able to undertake certain
6 activities and where you may not be able to undertake
7 certain activities?

8 A. The planning processes for route
9 selection, selection for transmission lines, take into
10 account that very information as part of the process
11 for route selection.

12 Q. Okay, so you are going to come back
13 and tell me exactly the same thing that you told me
14 before, that that will not take place in this kind of
15 exercise, but only when you come back to a more site
16 specific?

17 A. That is true.

18 Q. If that is the case, in what context
19 can this Board, or any other Board looking in the
20 future at a planning process, examine the issue of, for
21 example, the cumulative impact on particularly
22 sensitive lands of a series of activities? They are
23 not site specific any more, because they are taking
24 place over several sites.

25 A. Well, if they are taking place over

1 several sites, there would be a geographic basis for
2 that information and I think that in that context, then
3 you could look at a cumulative impact assessment for
4 that area. And as I mentioned to you earlier this
5 afternoon, we have made a commitment to do that as part
6 of the Moose River Basin system. And the extent to
7 which we have looked at cumulative effects in terms of
8 a temporal basis, and the emissions, waste effluents
9 land on a per terawatthour basis is the extent of what
10 we have looked at cumulative effects across these
11 lands.

12 Q. I understand what you said this
13 afternoon, and I have not forgotten it. But what I am
14 trying to figure out is -- well, maybe you have added
15 something new.

16 Are you saying then that it would be in
17 your perspective that if you see a situation where a
18 number of projects that are site specific are taking
19 place within a region or district and you see that
20 there is a danger of failure to look at the cumulative
21 impact of all of these, you, as Hydro, would take the
22 initiative to put in train a cumulative impact
23 assessment?

24 A. As I have mentioned already, we are
25 participating with those who are looking at the effects

1 on the Hudson Bay, James Bay bioregion. And we have
2 already provided evidence of our participation with the
3 Rawson Academy and others who are looking at cumulative
4 effects within that basin.

5 Q. Those are cumulative effects within a
6 particular area, with respect to the Moose River area
7 and the impacts on James Bay and so on; correct?

8 A. That is correct. And that looks at
9 three provinces.

10 Q. Yes, because there is the Manitoba,
11 Ontario, and Quebec impacts?

12 A. That is right.

13 Q. I am talking about something -- that
14 is good and I think that is -- who cares what I think?

15 The point, I think, is the issue of
16 whether or not you were saying something going beyond
17 that and I just want to understand.

18 Again, it deals with land use and it
19 deals with the context of these ecoregions or
20 ecodistricts. Are you saying that because we have not
21 been able to do this within the context of this broader
22 planning exercise, that if Hydro were to become aware
23 of a series of its projects, maybe they are not all
24 hydraulic, maybe some hydraulic, some are transmission
25 lines, but there is an issue of cumulative impact that

1 would not be addressed by discrete environmental
2 assessment processes that Hydro has within its purview
3 or is at least considering the concept of having
4 cumulative impact assessments to take into account on a
5 geographic basis, the impact of a member of projects?

6 A. No, I did not say that.

7 Q. Okay, that is what I thought you
8 said, so I just wanted to make it clear. What would
9 you do in addressing that kind of problem?

10 A. I think we would, probably through
11 project-specific environmental assessments, identify
12 the existing baseline information for a particular
13 project and we may well look at other projects in the
14 area, it depends. I would say obviously with respect
15 to hydraulic, if there was a number of hydraulic
16 developments on a river, we would have to look at the
17 effect of all those developments.

18 Q. Looking specifically at parks and
19 wilderness areas, I am sure you are aware of the fact
20 that land use planning is already under way in Ontario
21 under the Ministry of Natural Resources and planning
22 for new parks and other types of protected areas are
23 already on the way.

24 In the context of what Hydro is proposing
25 in this plan, how have you and how would you propose

1 that the two streams of what you might call system
2 planning, one undertaken by Natural Resources with
3 respect to parks and wilderness areas, maybe even the
4 second one at the federal level, and then Hydro's
5 planning process with respect to its needs and
6 requirements.

7 How are these to be integrated and maybe,
8 before you get to that, how have they been integrated
9 into the current plan?

10 A. Specifically with reference to parks,
11 I think I have already described what we have done with
12 respect to the hydraulic plan and there was specific
13 evidence provided in Panel 6 that indicated how the
14 plan was revised, taking into account effects of parks.

15 We obviously speak with Ministry of
16 Natural Resources as well as federal government and
17 others and that is most appropriately done on a project
18 specific basis. And if I can refer to Interrogatory
19 10.37.2. We have provided you specific information on
20 that very question. That is 10.37.2.

21 Q. Yes, well the question, I am sorry, I
22 don't --

23 THE CHAIRMAN: Would you give that number
24 again, please?

25 THE REGISTRAR: .60.

1 ---EXHIBIT NO. 683.60: Interrogatory No. 10.37.2.

2 [4:00 p.m.]

3 THE CHAIRMAN: I'm sorry, Mr.

4 Grenville-Wood, I had to interrupt to get the number.

5 MR. GRENVILLE-WOOD: No, that is fine.

6 Thank you, Mr. Chairman.

7 Q. The point is, you say you answered
8 the specific question, I don't completely agree with
9 you, because I think the issue really has to do with a
10 system approach which you presumably have undertaken
11 here, and others that are currently under way and are
12 not yet completed.

13 Now, you are telling me that you do this
14 on a site-specific basis, and I am asking you, because
15 that is a system approach that's taking place
16 provincially and federally and it is currently under
17 way, and what I am trying to understand is how in the
18 process of planning, never mind site specific, in terms
19 of your plans, how you try and take into account other
20 system plans that cover the same territorial boundaries
21 that you have?

22 MS. HOWES: A. We review plans that the
23 Ministry of Natural Resources has under way for their
24 wildlife strategy, for example, for the fishery
25 strategy. We are very familiar with what their plans

1 are, they are familiar with our plans.

2 We have advised them, for example, of

3 hydraulic stations -- potential hydraulic

4 sites in the North with some hydraulic potential. We

5 talk back and forth.

6 In the hydraulics plan there is specific

7 evidence indicating how that planning process was

8 undertaken to ensure that we were not including in our

9 hydraulic plan sites that have been designated as

10 parks, heritage rivers, et cetera.

11 Q. And what about areas that have not

12 been designated but are being considered for

13 designation, or that are what you might call endangered

14 spaces that are not yet designated?

15 A. Prior to the beginning of an

16 environmental assessment for a project-specific area,

17 there is preconsultation work done with the Ministry of

18 Natural Resources, contact is made at a regional and

19 district level to ensure that we have all of the

20 information available to us, and to ensure that we have

21 not missed areas that have not yet been designated.

22 Q. Okay. And again, that is only in the

23 context of site-specific?

24 A. That's correct. And with sites I

25 have included transmission.

1 Q. I guess the question that flows from
2 what you have just said is, what is the distinction you
3 draw between what you are identifying at the generic
4 level of other impacts, for example, the emissions and
5 the wastes and all those other problems, or impacts, I
6 guess, you are able to do some sort of assessment, if
7 you want to call it that, or at least an analysis in
8 general terms, of those kinds of things, but in the
9 context of the issues I have just raised you come back
10 to the question of only in the context of site
11 specific.

12 Now the reason I am asking this is, you
13 must know that in your broad brush planning process,
14 which is what we are looking at today, you will
15 presumably have, under some of your options, to look at
16 lands, just by the very nature of some of the options,
17 that are going to be within some of these
18 classifications. What I am trying to figure out is why
19 those kinds of issues, I guess land use issues, were
20 not raised in the context of environmental impacts by
21 you?

22 A. Because at the plan stage we felt it
23 was inappropriate and that's more appropriately done
24 during a site selection phase, to look at specific
25 areas and to identify those that should be excluded

1 from consideration.

2 Again I will refer you back to the
3 hydraulic plan as evidence of that particular process
4 that has gone the step further that has looked at site
5 selection. Land use issues will be considered as part
6 of the site selection process.

7 Q. Have you looked at the impact of your
8 plan on proposed candidate provincial parks?

9 A. I think I have answered that, that on
10 the site-specific basis we will talk with the
11 Ministries of Natural Resources and federal governments
12 to look at candidate park areas. And it is certainly
13 down for transmission and for site-specific projects.

14 Q. Well, I guess maybe I am
15 demonstrating a bit of a confusion about planning,
16 maybe it's a misconception I have. But it seems to me
17 that when one is planning, one plans for a number of
18 contingencies - maybe you don't, I don't know - but one
19 would have thought that one does. And one of the
20 contingencies that you are going to face as Ontario
21 Hydro knowing the limited number of options you have
22 available to you to meet the demands that you have
23 forecast are that you are going to have to do certain
24 things to produce either new supply or manage the
25 demand in some way. Some of the contingencies are

1 going to require you to do things on lands that are
2 going to be more or less sensitive as compared to each
3 other. In other words, some pieces of land are going
4 to be more sensitive for various reasons than other
5 pieces of land. And the issue me is, as part of your
6 planning process, ought not you to have a strategy for
7 dealing with these kinds of issues? Should you not be
8 looking at weighing them, considering in the context of
9 your options the impacts of your various options on the
10 lands depending upon their sensitivity to those
11 options?

12 A. Absolutely, and we will be doing that
13 at the next stage of the planning which is the site
14 selection stage and we will be looking at specific land
15 uses and we will be looking at sensitive areas, we will
16 be looking at geographic features, candidate park
17 sites, et cetera.

18 THE CHAIRMAN: But we shouldn't lose
19 sight of the fact that in the hydraulic plan all these
20 issues were addressed at the level this hearing, and
21 certain areas were specifically excluded from
22 consideration, and among those areas were wilderness
23 areas and parks areas, and areas which are under the
24 control of the Ministry of Natural Resources, as I
25 recall, and that's all part of the plan at this level.

1 MR. GRENVILLE-WOOD: Mr. Chairman, maybe
2 I am not making myself clear. What I am talking about
3 is not what is part of the plan. I am talking about
4 ought to be part of the planning process. They are not
5 quite the same thing.

6 THE CHAIRMAN: Earlier than that, I
7 assume it was part of the planning process, that
8 whoever propounded the hydraulic plan excluded those
9 particular areas from consideration even though there
10 might be hydraulic generation potential within those
11 areas.

12 MR. GRENVILLE-WOOD: Then the issue still
13 arises, Mr. Chairman, as to where, when you are looking
14 excluding wilderness areas, you are excluding parks,
15 but there are also areas which are sensitive that are
16 not yet designated.

17 The question, I guess, is, in the process
18 of thinking about how you go about looking at your
19 future as a utility in this area, how do you go about
20 weighing the impact on such lands and have you given
21 any thought to it?

22 I know, it's quite clear that certain
23 areas have been excluded for certain reasons. And the
24 question is a little bit more directed to the process
25 we go through in making plans. And I am not sure I am

1 going to get very far because I think we have dealt
2 this in some detail, but that's the issue that I am
3 finding not clearly enunciated in the answers I have
4 received so far.

5 MS. HOWES: Perhaps I will try it yet
6 again.

7 In the Panel 6 there was a fair amount of
8 discussion about criteria that are looked at as part of
9 a site selection process. The same was true in Panel 7
10 where a good deal of time was spent describing the
11 environmental analysis that are undertaken and the
12 trade offs, to use your terms, a fair amount of time
13 was spent discussing that. And the kinds of things
14 that you are talking about in my mind, sensitive areas,
15 wetlands, whatever, is more appropriately evaluated on
16 a project-specific basis and that will be done as the
17 next stage of our planning process.

18 The plan does not stop at this particular
19 hearing. It continues.

20 MR. GRENVILLE-WOOD: Q. What I am
21 understanding you to say is then at the stage of this
22 broader plan you are not in a position to analyze those
23 kinds of issues, that you prefer to do it at a more
24 site-specific basis?

25 MS. HOWES: A. We feel it's more

1 appropriate to do it at a site-specific basis.

2 Q. All right. As the Chairman said, I
3 don't have to agree with that.

4 THE CHAIRMAN: That's right. [Laughter]

5 MR. GRENVILLE-WOOD: It is good to have
6 permission sometimes, Mr. Chairman.

7 Q. Can I address a couple of questions
8 to Dr. Tennyson.

9 Referring to page 26210 in Volume 148, on
10 that page you make reference to four criteria,
11 employment, economic regional development, local
12 community impacts, social acceptance and risks and
13 benefits.

14 Nowhere in these criteria is the subject
15 addressed of the potential impact of the supply options
16 on parks or wilderness recreation targets, or in
17 general, in the opportunities for these recreational
18 targets. And as you probably know there are many
19 interest groups that have expressed interest on the
20 protection of these areas and the opportunities for
21 recreation. I don't have to list them, I am sure you
22 are aware of them.

23 The question, I guess, is, to what extent
24 did you, in the preparations of these plans and with
25 respect particularly to those aspects that are not

1 included in your four criteria, did you consult with
2 and would you think it is important in terms of the
3 planning process to consult with people who have a
4 particular interest in those kinds of uses?

5 DR. TENNYSON: A. There seemed to be a
6 number of questions in your question.

7 Q. Okay.

8 A. Could we try -- what do we want to
9 start with?

10 Q. All right. First, I notice you have
11 listed four criteria and you didn't deal with the issue
12 of recreation targets that already mentioned,
13 recreational land targets that are mentioned in SLUP,
14 and I am just wondering how come that's not in there.

15 A. I didn't address targets out of
16 SLUPs, no, you are absolutely right.

17 But if you were to talk about local
18 community impacts and what it includes, if we are going
19 to have a long discussion of that, then clearly when we
20 do that type of analysis, recreation, tourism, all of
21 those, anything that has a social component, as those
22 do, is part what we address and understand as part of
23 socio-economic impact assessment.

24 Q. Well, you would agree with me, I am
25 sure, that those are not just local impacts.

1 A. Clearly.

2 Q. Okay. Sorry, you were looking
3 something up. I didn't want to interrupt you.

4 A. No, it's okay.

5 Well, fine, including lifestyle impacts.
6 I mean, the title, we could change the factor. Maybe I
7 should have said community impacts and then we could
8 mean the broader, because we tend to look at both local
9 and regional.

10 I think we talked a lot through this
11 process on the various panels and certainly here about
12 the types of things we look at and the range of things
13 we look at.

14 Q. Well, given that, do you consider in
15 the context of planning again, that there is any place
16 for what you might call interest group consultations in
17 the development of the plans?

18 A. We had a lot of interest group
19 consultation.

20 Q. On this particular issue?

21 A. On what particular --

22 Q. On the recreational land and so on.

23 A. When the consultation programs were
24 designed and when we do it, there was a regional, there
25 was a provincial, those kinds of interests were

1 represented, were invited to all of them. And so
2 clearly, throughout the - I keep say approximately 10
3 years, but whatever period, it's getting close to 10
4 years now - clearly those are interests that I think
5 have been well represented in terms of the activities
6 over these years.

7 Q. Okay. And in the context of those
8 consultations, and so on, did it become clear or is it
9 clear to you that in Hydro's plans there ought to be
10 some Hydro-motivated, if you want to call it that,
11 reference to fostering the idea of recreational and
12 wilderness areas? In other words, is that part of
13 your -- one of the criteria that you would apply to
14 your selection, your options, your choices?

15 A. That's interesting you should say
16 that because we also get asked sometimes about
17 shouldn't we be fostering economic development. We are
18 in a certain business. And I think what we tried to
19 describe throughout this hearing is that whenever we
20 try to site, locate, route, whatever, a facility, one
21 of the main objectives is to minimize environmental
22 impacts. Hydro has a long history of developing a
23 process which involves interest groups, planners, all
24 sorts. We have interest in planner review groups, we
25 have a lot of consultation with the public. Through

1 that process we attempt to avoid sensitive areas,
2 wilderness areas, areas that are important from a
3 recreational wilderness perspective as well as from, as
4 you are indicating, the public perspective, because
5 they are concerned about these things.

6 And so I think that we have a long
7 history of showing the importance that we place on this
8 and how our planning is done in that respect.

9 Q. All right. In the context of Ms.
10 Howes' testimony a little further on, I think reference
11 was made in the context of -- at least the concept of
12 sustainable development.

13 Do you relate this issue of recreational
14 lands and wilderness areas, and so on, to that concept
15 of sustainable development, and if you do, how does it
16 fit in?

17 If you want a specific reference, it's
18 26244 where Ms. Howes was speaking about that.

19 244 and 245 you listed five aspects of
20 sustainable development, and in the context of parks,
21 wilderness, recreational areas, unused areas.

22 MS. HOWES: A. Maybe I can start and if
23 you have additional questions for Dr. Tennyson, you can
24 address them to her.

25 Q. Thanks.

1 A. I think perhaps on page 26245,
2 towards the bottom, Dr. Tennyson has mentioned that on
3 a site-specific basis in particular we look to identify
4 the adverse environmental effects and look for
5 appropriate mitigation of those effects.

6 The next element, I think, on that page,
7 is working with individuals, organizations and
8 communities which have a stake in our plans. And
9 obviously groups who are interested in wilderness areas
10 that are interested in recreational use would be some
11 of the organizations we would consult with.

12 Q. Now, the concept again, the reason I
13 asked you the question was in the context of the idea
14 of sustainable development and your statement that in
15 response to I think Mr. Campbell's question that Hydro
16 was a believer in the concept of sustainable
17 development. The question was, in that context, is the
18 preservation of wilderness parks and those kind of uses
19 of land part of your concept of sustainable
20 development, because it isn't one of the five you
21 listed?

22 A. I don't think it's specifically
23 identified. But as I have said, in particular
24 reference to the hydraulic plan, if I can use that as
25 an illustration, we certainly recognize the

1 significance of provincial parks wilderness areas that
2 have been so designated by the Ministry of Natural
3 Resources. As I have said, on a site-specific and
4 route selection process we will ensure that we are not
5 interfering with those particular land areas.

6 [4:24 p.m.]

7 Q. Thank you. Just one last question -
8 and I guess it is probably best based to you, Ms.
9 Howes - is this: You have indicated to me that there
10 is this, what you might even call a case study on
11 cumulative impacts with respect to the Moose River
12 Basin. In your examination of your planning process
13 and looking to the future, as you say, planning is not
14 a process that has an end necessarily. Are you
15 thinking about doing cumulative impact analyses in
16 other areas, more specifically with respect to land per
17 se, in the context of, I guess, the view of land use
18 planning and so on, and how would you be going about
19 that?

20 A. First, I want to be quite clear that
21 my reference to the Moose River Basin, I was suggesting
22 that we have made a commitment that we will do this
23 and it would be done within the context of the
24 co-planning for that particular basin. So, I don't
25 think I would call it as solid as a case study.

1 We have been participating, as I have
2 mentioned, with Rawson Academy and others to try and
3 develop appropriate techniques and methodologies.

4 I would also suggest that the Moose River
5 Basin does have a pretty strong land component, and so
6 I would suggest that there is going to be a fully
7 integrated look at the effects on air, land, and water.
8 So, I don't think I can add too much more to that.

9 Q. You would agree, would you not,
10 though, that in the context of the approvals that are
11 being sought here, that there is no way the Board can
12 assess the cumulative impact of those approvals?

13 A. Of the approvals being sought here?

14 Q. The cumulative impact of the projects
15 that you are seeking approval for here.

16 A. Well, that is a difficult question.
17 The impacts, for example, of the transmission component
18 are being dealt with through a separate environmental
19 assessment. The task of that particular, whatever
20 review process occurs, will be to look at the
21 environmental implications of the routing of that
22 particular transmission.

23 My understanding is that this Board is to
24 look at the need and rationale for the transmission
25 component.

1 Q. And in looking at the need and
2 rationale there is no way they can examine any
3 cumulative effect on the existing lands of those
4 transmissions because that is going to be done at a
5 specific hearing, or we don't know if it's going to be
6 done?

7 A. Well, I would assume there would some
8 kind of a review process. I couldn't say with any
9 certainty that it would be a hearing, but I think there
10 is a possibility that there will be a hearing.

11 MR. GRENVILLE-WOOD: Thank you, Mr.
12 Chairman, those are my questions. Thank you very much.

13 THE CHAIRMAN: You are appearing tomorrow
14 morning on behalf of another client; is that correct?

15 MR. GRENVILLE-WOOD: With your
16 permission, Mr. Chairman.

17 THE CHAIRMAN: Yes. I think your client
18 can take the questions you have asked today and use
19 them, so I hope it there will be a new series of
20 subjects tomorrow.

21 MR. GRENVILLE-WOOD: I think you can be
22 assured of that.

23 THE CHAIRMAN: We will adjourn until
24 tomorrow morning at ten o'clock.

25 THE REGISTRAR: Please come to order.

1 This hearing will adjourn until ten o'clock tomorrow
2 morning.

3 ---Whereupon the hearing was adjourned at 4:30 p.m., to
4 be reconvened on Thursday, June 18, 1992 at
10:00 a.m.



E R R A T A
and
C H A N G E S

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<u>Page No.</u>	<u>Line No.</u>	<u>Discrepancy</u>
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(vi)		Page reference for Undertaking No. 684.33 s/r 28789 rather than 28759.
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